

LANCASHIRE COUNTY COUNCIL

INTERIM REPORT
OF THE
MEDICAL OFFICER OF HEALTH
FOR THE YEAR 1946

(Presented to the County Council, May 6th, 1948)



LANCASHIRE COUNTY COUNCIL

F. Taylor & Co. (Blackpool) Ltd., Back Regent Road, Blackpool

1948

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Chairman of Committee:

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Chairman of Committee:

*LADY A. F. P. WORSLEY-TAYLOR, J.P.

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(*County Aldermen)

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INTERIM REPORT

OF THE

MEDICAL OFFICER OF HEALTH

for the Year ended December 31st, 1946.

To the Chairman and Members of the Lancashire County Council.

I have the honour to submit, for your consideration the fifty-eighth annual report on the health, sanitary conditions and circumstances of the Administrative County of Lancaster in respect of the year ended 31st December, 1946, together with the vital statistics relative to that period.

At the suggestion of the Ministry of Health the report is once again of the interim type.

The year 1946 was the first complete year after the cessation of hostilities and many of the difficulties arising out of the war remained. For various reasons environmental conditions continued on a war-time basis. The absence of a pool of labour, particularly female, produced a gradually increasing deficiency in the staffs of hospitals and institutions, in particular those caring for the chronic sick and infectious cases. Efforts to improve the situation included the employment of ward orderlies and more recently the use of part-time nursing staff on an extensive scale. These measures have so far been adequate to prevent the closure of wards although many are not fully staffed.

The following remarks indicate the more noticeable variations in the vital statistics.

The most satisfactory feature was the fall in the maternal mortality rate to 1.42 per 1,000 total births, which was the lowest ever recorded for the Administrative County. It was 0.90 lower than the figure for 1945 and compares very favourably with the average rate of 4.47 for the 1931-40 decade. In addition, for the first time, the rate was lower than that for England and Wales, viz., 1.43. It may be argued that the reduction in the number of deaths from puerperal and post-abortive sepsis was largely due to the introduction of the sulphonamide drugs and penicillin but the ante-natal and maternity services also played their part, and this is evidenced by the gradual but material decline in the mortality from "other maternal causes."

The infant mortality rate of 46 per 1,000 live births equalled the previous lowest attained in 1944 and compares with 43 for England and Wales. There is thus a continuing gain in the number of children who survive the first and most hazardous year of life, which state of affairs, taken in conjunction with the improved birth-rate, is helping to overcome the pre-war decline in the numerical strength of the younger population of the country.

The birth-rate of 18.42 per 1,000 population showed an improvement of 1.80 over 1945 and, with the exception of that attained in 1944, was the highest since 1921. For the first time since 1939 there was a reduction in the number of illegitimate live births—1,872 as against 2,182 in the previous year—despite the fact that there was an increase of approximately 5,000 in the total live births.

The number of cases of notifiable infectious diseases occurring during the year showed a considerable reduction on the previous year. In particular, the notifications of scarlet fever and diphtheria were both low, those of scarlet fever being the lowest since 1917, and those of diphtheria at 654 being the lowest ever recorded. In this connection it is almost certain that the schemes for diphtheria immunisation have played a major part in contributing to the low incidence of the disease during the year and further that previous immunisation produces a favourable effect on the course of the disease should it be contracted. There is, however, a need for every effort to be made to increase the numbers of protected pre-school children, since this group is the one most subject to diphtheria. Further protection with a "boosting" dose of prophylactic at the commencement of school life should also be encouraged.

There was an outbreak of food poisoning towards the end of the year. On investigation the cause of the outbreak was traced to certain food-packs prepared at a central depot. Two carriers were found at this depot and upon appropriate action being taken the outbreak came to an end. In this connection it cannot be over-emphasised that care in the handling of food is essential to reduce the risk of such outbreaks occurring. A full account of the outbreak is embodied in the Report.

The latter part of the year was also marked by outbreaks of gastro-enteritis amongst newly-born infants in certain maternity hospitals in various parts of the country. Fortunately, however, such hospitals in the Administrative County including those under the control of the County Council, were not involved in any specific outbreaks of the illness. Nevertheless, the necessary steps were taken to obtain all available information as to deaths occurring throughout the Administrative County area amongst infants during the first few weeks of life. It was found, however, that little more than the usual and expected incidence of neo-natal gastro-enteritis occurred.

The production of greater quantities of safer milk is slowly increasing. In 1938, there were only 51 producers of tuberculin-tested milk in the County area. By the end of 1946 this number had increased to 184, whilst the number of accredited producers had risen from 712 to 815. The introduction of heat treatment by the Ministry of Food has also been a factor in obtaining a safer milk supply.

The work under the Food and Drugs Act showed a satisfactory increase and it is hoped will continue to do so until a level of five samples per 1,000 of the population is reached in all County districts.

Arrangements have been made under the Cancer Act whereby facilities for any type of treatment found to be necessary are available to all patients found to be suffering from cancer. These arrangements are based on centres in Manchester and Liverpool.

The National Health Service Act, 1946, was passed by Parliament during the year. Together with the National Health Insurance Act, 1946, and the proposed legislation designed to abolish the present poor law system, it constitutes the major part of a programme of social reform and will affect to a considerable degree the public health administration of the country.

The general effect of the Act is to transfer to the Minister of Health the control of all hospitals, voluntary and municipal, including, in so far as the County Council is concerned, the treatment services provided at County hospitals, tuberculosis dispensaries, sanatoria, venereal diseases clinics and public assistance institution hospitals and to impose on the statutory Health Committees of County Councils, as the Local Health Authorities, duties:—

- (a) entirely new to local government, e.g., home-nursing, formerly undertaken by voluntary organisations;
- (b) modifying, extending or developing existing services such as health visiting, vaccination, etc.;
- (c) hitherto carried out wholly or in part by local sanitary authorities and other bodies, viz., ambulance services, immunisation and functions relating to mental health.

Whilst the provisions of all Parts of the Act materially affect public health administration in general, those of Parts III and V, based as they are for administrative purposes on County and County Borough Councils, bring about fundamental changes in so far as the organisation and functions of the County health services are concerned and much will depend on the degree of liaison between local domiciliary health services and Regional Boards if the measures for the safeguarding of the public health are to be fully implemented.

I take this opportunity of once again expressing to the members of the County Council, on behalf of the Medical department, our grateful thanks for their continued encouragement and support.

I am, Ladies and Gentlemen,

Your obedient Servant,

F. HALL,

County Medical Officer of Health.

Public Health Department,
County Offices, Preston.
February, 1948.

STATISTICS AND SOCIAL CONDITIONS OF THE COUNTY

Physical features and general character of the County.—The Geographical County of Lancaster is bounded on the north by Westmorland, on the north-west by Cumberland, on the east by Yorkshire, on the south by Cheshire, and on the west by the Irish Sea. The north-western portion of the County, the peninsulas of Furness and Cartmel—physically a part of the Lake Country, is separated from the rest of the County by Morecambe Bay and the estuary of the River Kent.

The greatest length of the County from Wrynose Pass, Dunderdale, in the north-west, to Denton in the south-east is roughly 80 miles, and from east to west in the widest part, south of the Ribble, about 45 miles; above the River Ribble the width contracts to some 25 miles.

The Pennine Range runs along the eastern side of the County. In the north is Conistون Old Man, the highest point in Lancashire, 2,633 feet, whilst two of the neighbouring fells attain to over 2,500 feet. The highest point south of Morecambe Bay is at Greycarth, Leek, Lunesdale Rural District (2,250 feet).

The chief rivers are the Mersey, Irwell, Ribble, Wyre and Lune, which flow into the Irish Sea. In the northern portion are the Rivers Kent, Leven, Keer, Cocker, Duddon, Brathay, Winster, etc. The only large Lakes entirely in Lancashire are Conistون (the third largest lake in England) and Esthwaite. Two-thirds of the shore of Lake Windermere is in the County.

Almost every type of scenery is to be found within the borders of Lancashire, ranging from the mountain rock and lakes of the Furness area and the wild moorland of the Yorkshire boundary to the valleys of the Lune and Ribble and the cultivated plains sweeping from the Pennines to the sea.

The County can be roughly divided into two distinct types of area, that in the north consisting chiefly of sparsely populated rural districts which, as the mid-south and south-east are approached, resolve themselves into densely populated industrial areas—the latter naturally being almost coterminous with the Lancashire coalfield. Whilst the northern portion of the County together with the fertile plains of the Fylde and west coast are predominantly agricultural in character, the industrial life is principally centred around textile works, mining and quarrying.

Area of Administrative County.—The area of the Administrative County *as constituted on the 31st December, 1946*, was 1,037,662 statute acres. No change of boundary affecting the County area took place during the year.

The acreage of each County district, compiled in accordance with the Registrar-General's Census of England and Wales, 1931—County of Lancaster (Part II), incorporating alterations of boundary effected by the first general review of districts under Section 46 of the Local Government Act, 1929, and subsequent alterations, is given in Table 2, pages 76 to 83.

In the preparation of tables and statistics for this report, all adjustments necessary on account of the alteration of districts have been made, unless otherwise stated.

Population of Administrative County.—The mean civilian population of the Administrative County during 1946 as estimated by the Registrar-General was 1,924,880—an increase of 92,460 over the estimate of 1,832,420 for the previous year. The total population of the urban districts in 1946 was estimated at 1,655,920 and that of the rural districts at 268,960.

The *natural* increase in the population of the Administrative County was 11,179, compared with 6,411 in 1945—an increase of 4,768, and it would therefore appear that the large increase shown by the Registrar-General's estimate was mainly due to the return to civil life of members of the forces.

The Census, 1931, population of the Administrative County in terms of constitution as at the 31st December, 1946, i.e., adjusted in accordance with the alterations of boundaries since the census, was 1,779,809 (urban districts 1,564,210, rural districts 215,599). Thus, in spite of a net loss to the County of 15,264 of population sustained in consequence of such adjustments, the 1946 estimate shows an increase of 145,071—equal to 8.1 per cent.—over the census figure. The percentage increases for the urban and rural districts are 5.86 and 24.7 respectively.

The tabular statement below shows the population of the Administrative County and of the urban and rural districts *at the date of the Census, 1931*, together with the estimates for the succeeding years:—

Year	Administrative County		Urban Districts		Rural Districts	
	Population	Annual increase or decrease	Population	Annual increase or decrease	Population	Annual increase or decrease
1931	1,795,073	—	1,531,112	—	263,961	—
1932	1,802,700	+ 7,627	1,536,200	+ 5,088	266,500	+ 2,539
1933	1,802,730	+ 30	1,570,232	+ 34,032	232,498	— 34,002
1934	1,807,090	+ 4,360	1,580,659	+ 10,427	226,431	— 6,067
1935	1,821,100	+ 14,010	1,591,510	+ 10,851	229,590	+ 3,159
1936	1,842,900	+ 21,800	1,606,500	+ 14,990	236,400	+ 6,810
1937	1,859,200	+ 16,300	1,616,700	+ 10,200	242,500	+ 6,100

Year	Administrative County		Urban Districts		Rural Districts	
	Population	Annual increase or decrease	Population	Annual increase or decrease	Population	Annual increase or decrease
1938	1,880,600	+ 21,400	1,631,900	+ 15,200	248,700	+ 6,200
1939	1,904,100	+ 23,500	1,643,500	+ 11,600	260,600	+ 11,900
1940	1,900,870	— 3,230	1,632,840	— 10,660	268,030	+ 7,430
1941	1,918,320	+ 17,450	1,641,020	+ 8,180	277,300	+ 9,270
1942	1,885,600	— 32,720	1,611,300	— 29,720	274,300	— 3,000
1943	1,848,650	— 36,950	1,580,760	— 30,540	267,890	— 6,410
1944	1,837,800	— 10,850	1,575,900	— 4,860	261,900	— 5,990
1945	1,832,420	— 5,380	1,575,290	— 610	257,130	— 4,770
1946	1,924,880	+ 92,460	1,655,920	+ 80,630	268,960	+ 11,830

Note : During the years, 1939-46, non-civilians are excluded.

Table 2, pages 76 to 83, shows the estimated mean civilian population of each County district in 1946, together with the Census, 1931 enumerations adjusted in accordance with the alterations of districts since that date.

The following table gives the area, population, persons per acre, and acres per person of the Administrative County *as constituted on the 31st December, 1946*, distributed between the non-county boroughs, urban and rural districts:—

	Area in acres. 31/12/1946	Population		Persons per acre	Acres per person
		Census, 1931 (adjusted)	Estimated mean civilian population, 1946		
Municipal Boroughs (26)	123,684	840,676	849,040	6.86	0.14
Urban Districts (68)	248,956	723,534	806,880	3.24	0.30
Rural Districts (15)	665,022	215,599	268,960	0.40	2.47
Administrative County (109)	1,037,662	1,779,809	1,924,880	1.85	0.53

VITAL STATISTICS.

Summary of Vital Statistics, 1889-1946.—The following table compares the County birth and death-rates for the year 1946 with the previous year, and with the 57 years, 1889-1945, grouped in quinquennial periods:—

	Per 1,000 of estimated population				Maternal mortality rate		Rate of deaths under one year per 1,000 live births
	Live birth-rate	Crude death-rate	Death-rate from tuberculosis of respiratory system	Death-rate from cancer	Per 1,000 live births	Per 1,000 total (live and still) births	
Mean of 5 years—							
1889-1895 (7 years)	30.34	18.76	*1.35	—	—	—	157
1896-1900	27.73	17.24	1.14	—	—	—	165
1901-1905	26.16	15.32	0.91	0.63	—	—	145
1906-1910	24.02	14.03	0.86	0.71	—	—	125
1911-1915	21.72	14.42	0.87	0.90	4.86	—	120
1916-1920	18.09	14.47	0.93	1.08	5.24	—	95
1921-1925	17.71	12.59	0.71	1.18	4.91	—	83
1926-1930	14.56	12.49	0.60	1.36	5.75	—	74
1931-1935	13.36	12.58	0.51	1.50	5.06	4.81	65
1936-1940	14.05	13.16	0.44	1.60	4.33	4.13	58
1941-1945	16.65	12.91	0.41	1.79	2.70	2.60	52
Year—							
1945	16.62	13.12	0.38	1.90	2.39	2.32	50
1946	18.42	12.61	0.39	1.85	1.46	1.42	46
Increase or decrease in 1946 on—							
Mean of 5 years, 1941-45	+ 1.77	— 0.30	— 0.02	+ 0.06	— 1.24	— 1.18	— 6
Previous year	+ 1.80	— 0.51	+ 0.01	— 0.05	— 0.93	— 0.90	— 4

* Six years.

Note : The death-rates given in this Report for the County area and for the County districts are (except where otherwise stated) "unweighted" or "crude" rates, i.e., they are neither "standardised" nor "corrected".

Live Births and Birth-rates.—The number of live births registered in or belonging to the Administrative County during the year ended 31st December, 1946, showed a substantial increase over the figure for the previous year; they numbered 35,464, or 5,009 more than in 1945. In 1944, the live births numbered 34,268 or 1,196 less than in the year under report.

The sex of the children born alive during 1946 is shown below. For comparative purposes, the figures for the previous year and for 1938—the last year before the war—are also given.

Year	Urban Districts			Rural Districts.			Administrative County		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1938	11,641	11,255	22,896	1,847	1,850	3,697	13,488	13,105	26,593
1945	13,510	12,701	26,211	2,171	2,073	4,244	15,681	14,774	30,455
1946	15,899	14,966	30,865	2,374	2,225	4,599	18,273	17,191	35,464

The 35,464 live births credited to the Administrative County represent a birth-rate of 18·42 per 1,000 of the estimated mean civilian population—an increase of 1·80 per 1,000 over the rate for the previous year. Compared with the average rate for the five years 1941-45, the 1946 rate shows an increase of 1·77. With the exception of the year 1944, it is the highest rate recorded since 1921.

The rate for the total urban districts in 1946 was 18·63 per 1,000 of the population, and that for the rural districts 17·09. These rates represent increases of 2·00 and 0·59 respectively over those for the previous year.

As a matter of interest the live birth-rates for each of the last 58 years and for the quinquennial periods are reproduced in Table 1 on page 75.

It is now usual for the live birth-rate for the Administrative County to be below the rate for the whole of England and Wales, and that for the year 1946 is no exception, being 0·7 per 1,000 of the estimated mean civilian population below the rate for the country as a whole.

The following table shows the County, urban and rural live birth-rates for the 10 years 1936 to 1945. For comparative purposes the birth-rates for the whole country are also given. The rates for the Administrative County area and for England and Wales from 1939 onwards are calculated per 1,000 of the estimated civilian population:—

	Live birth-rate per 1,000 of the estimated population									
	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Urban Districts	13·78	14·03	14·11	14·37	14·76	16·07	17·38	18·65	16·63	18·63
Rural Districts	14·05	14·86	15·12	14·87	14·55	15·42	16·98	18·61	16·50	17·09
Administrative County	13·81	14·14	14·25	14·44	14·73	15·97	17·32	18·64	16·62	18·42
England and Wales	14·9	15·1	14·9	14·8	14·9	17·0	18·1	19·8	17·8	*19·1

* Provisional figure.

The excess of births over deaths in the Administrative County for the 10 years, 1937-46, is shown below:—

Excess of births over deaths:

Year 1937	964	Year 1942	6,898
„ 1938	3,463	„ 1943	7,508
„ 1939	2,202	„ 1944	10,655
„ 1940	196	„ 1945	6,411
„ 1941	3,207	„ 1946	11,179

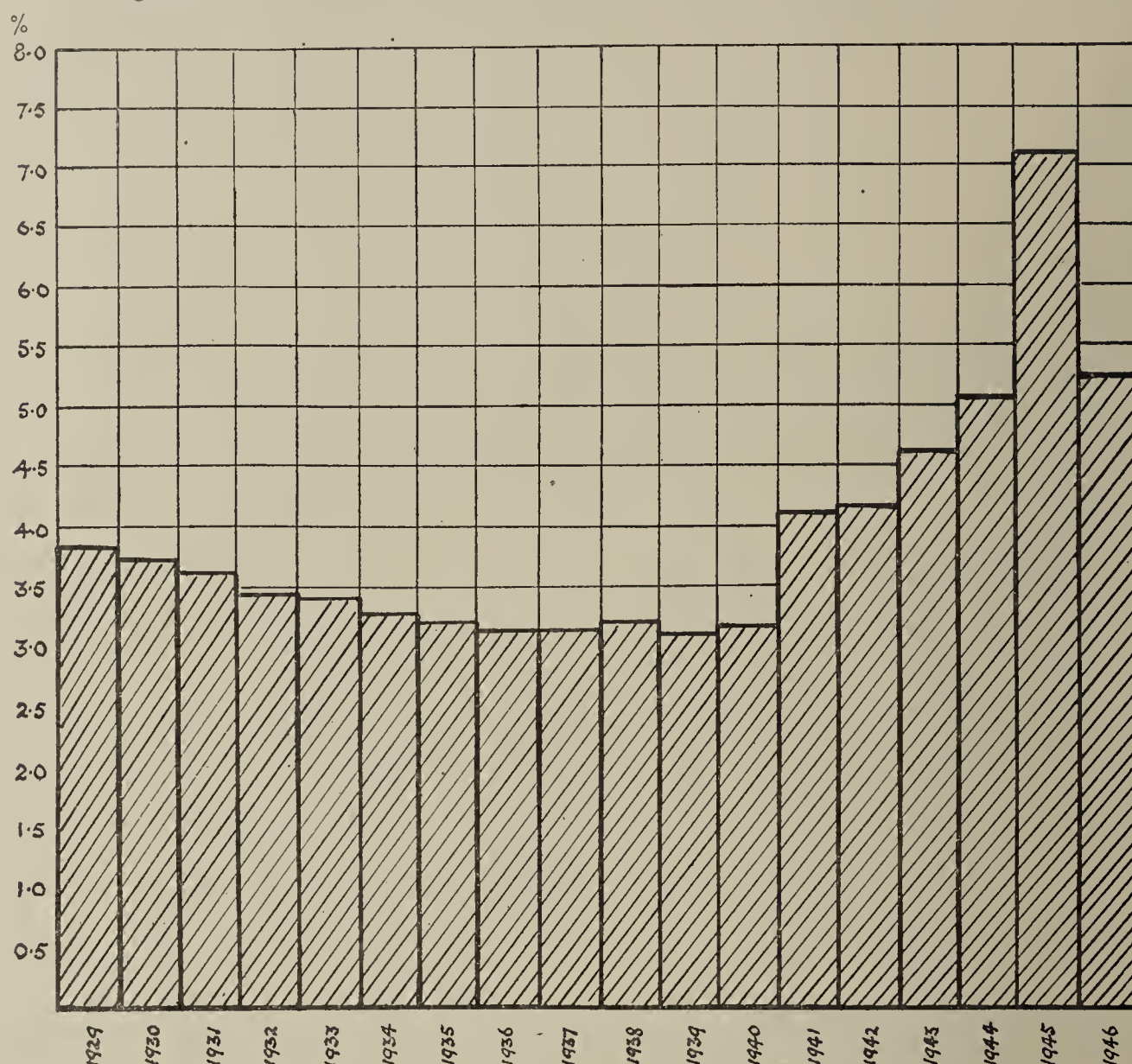
The number of births in each municipal borough, urban and rural district, together with the corresponding birth-rates, are given in Table 2, pages 76 to 83.

ILLEGITIMATE LIVE BIRTHS.—The births of illegitimate children registered during the year 1946, compared with those registered in the previous year and in 1938, are shown below:—

Year	No. of illegitimate live births	Increase or decrease on previous year	Percentage increase or decrease on previous year	Percentage of total live births
1938	860	+48	+5·9	3·23
1945	2,182	+447	+25·7	7·16
1946	1,872	—310	—14·2	5·27

It will be seen that in spite of the fact that the number of live births in 1946 was 5,009 greater than in 1945, the number which were illegitimate fell by 310 from 2,182 to 1,872, which represents a percentage decrease of 14.2. Although the percentage of illegitimate live births to total live births was 0.24 in excess of the average of the five years, 1941-45, it was in fact 1.89 less than in 1945—the first time a reduction has taken place since 1939.

The histogram here introduced shows, for each year since 1929, the percentage of total live births which were illegitimate.



STILLBIRTHS.—The number of stillbirths registered in the Administrative County during 1946 was 1,137 or 166 more than in the previous year. This figure was equivalent to a rate of 31 per 1,000 total (live and still) births and represented an increase of 1 per 1,000 over 1945. The lowest rate on record was that of 29 per 1,000 total births in 1944. The provisional stillbirth rate for the whole of England and Wales in 1946 was 27 per 1,000 total births. Expressed in terms of 1,000 of civilian population, the Administrative County rate was 0.59 against a provisional rate of 0.53 for the country as a whole.

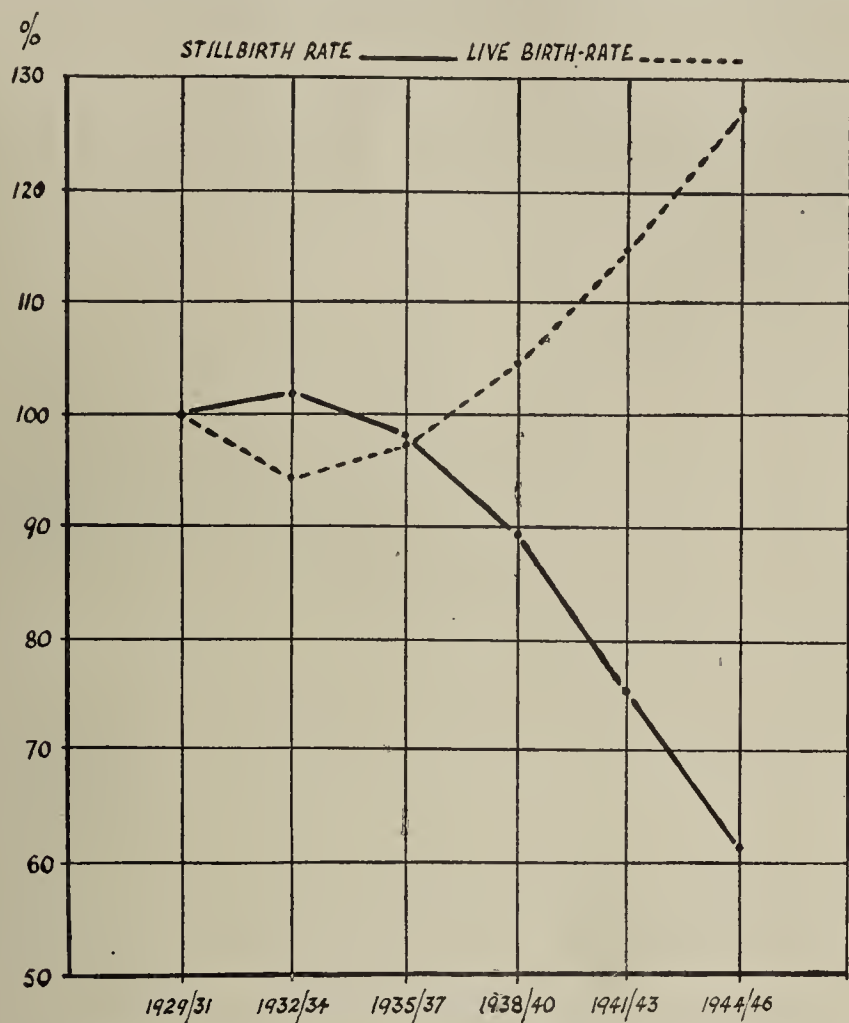
The table here given shows the number of stillbirths registered and the equivalent rates per 1,000 total births for the years 1945 and 1946 and the last pre-war year, 1938:—

Year	Total No. of live and stillbirths registered	No. of stillbirths registered	Rate per 1,000 total births
1938	27,945	1,352	48
1945	31,426	971	30
1946	36,601	1,137	31

The local variation in the stillbirth rates in the area of the Administrative County is shown in Table 2, pages 76 to 83.

The first year for which records of stillbirths in the Administrative County are available was 1929. It is of interest, therefore, to study the trend of the stillbirth rate since that year. In the following diagram it will be seen how, in comparison with the three-year period 1929-31, it has fallen rapidly until in the

three-year period 1944-46, it is but 61·2 per cent. of what it was in 1929-31. This is particularly striking when regard is had to the fact that since 1932-34 the live birth-rate has been steadily rising and for the three-year period 1944-46 is 27·9 per cent. higher than it was in 1929-31.



The reduction in the stillbirth rate is of significance in as much as it may be said that the population is to-day being increased in no small measure by many infants who would formerly never have had a separate existence. This satisfactory state of affairs is undoubtedly due, in part, to the better and more extensive facilities for ante-natal treatment and advice which are available to-day.

Deaths and Death-rates.—The total number of deaths registered in the Administrative County during 1946, after correction for inward and outward transfers, was 24,285—an increase of 241 as compared with the figure of 24,044 for the previous year.

The sex distribution of the persons dying during 1946 is shown below. The figures for the previous year and for 1938—the last year before the war—are given for comparative purposes.

Year	Urban Districts			Rural Districts			Administrative County		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1938	10,278	10,095	20,373	1,394	1,363	2,757	11,672	11,458	23,130
1945	10,541	10,557	21,098	1,454	1,492	2,946	11,995	12,049	24,044
1946	10,636	10,603	21,239	1,551	1,495	3,046	12,187	12,098	24,285

The following table gives the deaths in age periods in 1946, compared with each of the previous ten years:—

Year	Deaths in age periods											Total
	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—	
1936	1,468	248	288	484	643	931	1,250	2,347	4,386	6,227	5,412	23,684
1937	1,613	238	295	391	706	955	1,376	2,476	4,574	6,587	5,514	24,725
1938	1,463	238	319	460	628	818	1,223	2,170	4,299	6,262	5,250	23,130
1939	1,549	168	220	380	561	862	1,204	2,281	4,550	6,831	6,238	24,844
1940	1,636	533		431	2,976			7,722		13,969		27,267
1941	1,754	584		477	2,868			6,720		12,653		25,056
1942	1,593	386		350	2,427			6,365		12,108		23,229
1943	1,735	409		304	2,308			6,429		13,341		24,526
1944	1,594	337		338	2,118			6,223		13,003		23,613
1945	1,525	324		293	2,007			6,241		13,654		24,044
1946	1,664	250		210	2,047			6,206		13,908		24,285

A classified statement of the causes of death in 1946, by age groups and sex for the aggregates of the urban and rural districts is given in Table 4, page 89.

The crude death-rate for the Administrative County for 1946 at 12.61 per 1,000 of the estimated mean civilian population was 0.51 per 1,000 less than that for the previous year. The rate for the total urban districts decreased from 13.39 per 1,000 population to 12.82 and that for the total rural districts at 11.32 per 1,000 was 0.13 less than in 1945.

The table below shows the crude death-rates of the County from 1936 to 1946, together with those for the urban and rural areas, and also gives the rates for England and Wales. All rates from 1939 onwards are calculated per 1,000 estimated civilian population:—

	Crude death-rate per 1,000 of the estimated population.										
	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Urban Districts	13.09	13.47	12.48	13.33	14.78	13.40	12.59	13.51	13.02	13.39	12.82
Rural Districts	11.21	12.14	11.08	11.20	11.63	11.03	10.68	11.79	11.64	11.45	11.32
Administrative County	12.85	13.29	12.29	13.04	14.34	13.06	12.31	13.26	12.84	13.12	12.61
England and Wales	12.1	12.4	11.6	12.1	14.3	13.5	12.3	13.0	12.7	12.6	*12.0

* Provisional figure.

Compared with the average rate for the five years 1941-45, the County rate for 1946 shows a decrease of 0.30 per 1,000 population.

It is usual for the County death-rate to be higher than that for the country as a whole, and the 1946 figure is no exception being 0.6 greater than the rate for England and Wales. The County death-rate, however, is a "crude" death-rate and in order to obtain a true comparison with the rate for the country as a whole, it should be adjusted by the use of an areal comparability factor. This factor has not been available since 1941.

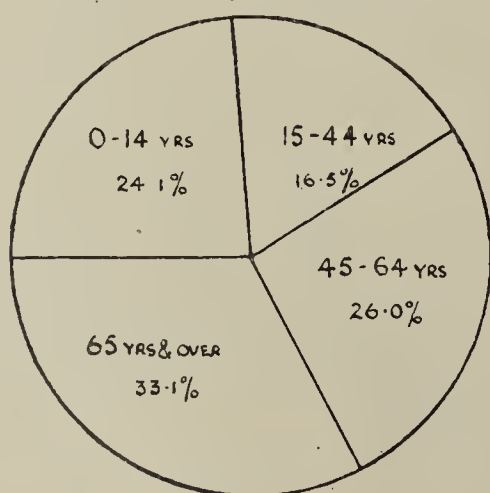
In Table 1 on page 75 are given the annual death-rates with the quinquennial averages since the year 1889 for the County and the aggregated urban and rural districts.

Details of the deaths in the various sanitary areas, classified under the headings given in the new Abridged List of Causes as used in England and Wales and Northern Ireland (Manual of the International List of Causes of Death, 1938), are given in Table 3, pages 84 to 88, and are shown for each district by sex in Table 2, pages 76 to 83.

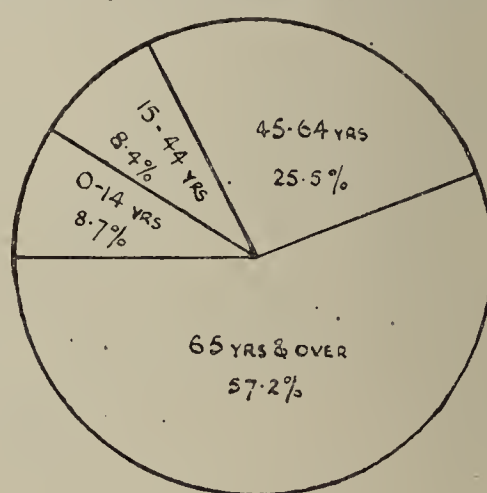
An examination of the age groups of the total deaths from all causes shows that in 1946 more than half the deaths occurred amongst persons of 65 years of age and over. This was not the case some 25 years ago. Then, the deaths of persons of 65 years and over accounted for only 33.1 per cent. of the total deaths, whilst children from birth to 14 years of age claimed 24.1 per cent.

The remarkable re-distribution of deaths at different ages which has occurred during the last 25 years is clearly illustrated by the two diagrams here reproduced, which show the deaths in specified age groups expressed as percentages of the total deaths.

Deaths in specified age groups expressed as percentages of the total deaths at all ages.



Year 1921.



Year 1946.

It will readily be seen that whilst the percentage deaths in the 45-64 age group has remained very nearly stationary, the percentage under those ages has decreased to less than half of what it was 25 years earlier, and in the group 65 years and over, it has almost doubled.

To what then can this reversal of age of dying be attributed? It is apparent that it is due to two principal factors, viz., (a) the increasing longevity of the population and (b) the falling birth-rate.

(a) The expectation of life has been increasing for many years whilst at the same time the birth-rate has been falling. The age constitution of the population has therefore during this period been undergoing a complete change and there is consequently now a preponderance of older people whose risk of dying is naturally greater than that of persons at any other period of life. This is reflected especially in the rise in the deaths from such conditions as heart disease, cancer and intra-cranial vascular lesions which chiefly affect people of advanced years.

(b) The falling birth-rate has, over a period of time, reflected itself in the decreasing numbers of population in the lower age groups with a consequent diminution in the number of potential deaths in those groups. This, coupled with the considerable decrease in the infant death-rate, has brought the proportion of deaths occurring in the lower age groups to a relatively small percentage of the whole.

The increasing preponderance of older people in the population is particularly emphasised by an analysis by age of the deaths from heart disease and cancer which, for many years, have been the two principal causes of death, and which are, in the main, conditions associated with the later periods of life. The statement here given compares the division by percentages in age groups of the total deaths from each disease in 1921 and 1946.

Age group	Percentage of total deaths from			
	<i>Heart Disease</i>		<i>Cancer</i>	
	1921	1946	1921	1946
15-44	15.2	4.3	10.4	7.0
45-64	34.6	23.0	51.4	41.3
65 and over	48.8	72.4	37.6	51.2

Again, pulmonary tuberculosis deaths are usually heaviest in the group of persons between the ages of 15 and 45 years, but even here, although this group still claims the greatest percentage of the deaths from this cause, evidence is forthcoming of a tendency for a portion of the mortality to be moving from that group to the older groups, as will be seen below:—

Age group	Percentage of total deaths from	
	<i>Pulmonary Tuberculosis</i>	
	1921	1946
0-14	4.5	1.9
15-44	66.1	57.3
45-64	26.5	31.6
65 and over	2.7	8.9

During the past three or four years and particularly in 1946, the numbers of births have considerably increased but, from past experience, this rise is probably of a transitory nature only, and it can reasonably be assumed that the numbers in the lower age groups of the population, which are annually passing into the older groups, will, as in pre-war days, not be replaced to the full extent in later years. Consequently, as those in the older age groups die there will be fewer in the lower groups to replace them and a diminution in the population will follow. This state of affairs will continue unless and until a substantial upward trend in the birth-rate sufficient to raise the reproduction rate above 1.0 can be recorded.

The provisional reproduction rate (which makes allowance for a continuing improvement in survivorship conditions) for the country as a whole for the first time for many years was in 1946 greater than 1.0 (i.e., 1.102).

Unfortunately reproduction rates for the Administrative County are not available but, regarding national figures as in some measure indicative of conditions applicable to the County, it is quite evident that an annual birth-rate approaching that attained in 1946 will be required to maintain the population at its present size.

PRINCIPAL CAUSES OF DEATH.—The relative importance of the principal causes of death is shown in the following table:—

Cause of death	1946	
	No. of deaths	Percentage to total deaths
Heart disease	6,873	28.3
Cancer	3,567	14.6
Intra-cranial vascular lesions	2,929	12.0
Bronchitis	1,541	6.3
Congenital malformations, birth injury, infantile disease and premature birth	1,031	4.2
Tuberculosis (all forms)	905	3.7
Violence (including suicide and road traffic accidents)	877	3.6
Pneumonia (all forms)	815	3.3
Other diseases of circulatory system	750	3.0
Nephritis	607	2.4
Other digestive diseases	556	2.2
Influenza	292	1.2
*Certain infectious diseases	291	1.1

* Includes smallpox, measles, scarlet fever, whooping cough, diphtheria, typhoid and paratyphoid fevers, and diarrhoea (under 2 years).

In the paragraphs following reference is made to the direct contribution to mortality of the chief causes of death. As mentioned in the note on page 8, the death-rates, unless otherwise stated, are "crude" rates, and in considering the statistics the ageing of the population should be borne in mind. The "crude" death-rates of diseases mainly affecting elderly people, such as heart disease, cancer, intra-cranial vascular lesions, etc., overstate the real mortality average.

HEART DISEASE.—The number of deaths in 1946 classified under the heading "heart disease", 6,873 (males 3,390, females 3,483), was 232 in excess of the figure for the previous year, and was, as usual, considerably larger than that for any other item in the list of causes of death. It represented 28·3 per cent. of the total deaths from all causes and was equivalent to a death-rate of 3·57 per 1,000 of the estimated civilian population.

The following table shows how, over a period of years, the fatalities from heart disease have increased:—

Year	No. of deaths	Crude death-rate per 1,000 population	Year	No. of deaths	Crude death-rate per 1,000 population
1927	3,441	1·91	1937	6,217	3·34
1928	3,506	1·93	1938	6,224	3·30
1929	4,523	2·49	1939	7,085	3·72
1930	4,230	2·34	1940	6,571	3·45
1931	4,824	2·67	1941	5,960	3·10
1932	4,823	2·67	1942	5,884	3·12
1933	5,232	2·89	1943	6,150	3·32
1934	5,052	2·79	1944	6,311	3·43
1935	5,444	2·98	1945	6,641	3·62
1936	6,012	3·26	1946	6,873	3·57

In the table below are given the numbers of deaths from heart disease at various age periods in the Urban and Rural districts and the Administrative County during 1946. For comparative purposes the figures for the previous year and for 1938 are also given:—

Year	Urban Districts						Rural Districts						Administrative County					
	All ages	0–	5–	15–	45–	65–	All ages	0–	5–	15–	45–	65–	All ages	0–	5–	15–	45–	65–
1938	5,428	2	23	303	1,486	3,614	796	—	1	39	198	558	6,224	2	24	342	1,684	4,172
1945	5,747	4	22	240	1,424	4,057	894	—	3	31	174	686	6,641	4	25	271	1,598	4,743
1946	5,973	—	8	265	1,390	4,310	900	—	—	35	193	672	6,873	—	8	300	1,583	4,982

CANCER.—Deaths from cancer in the Administrative County during 1946 accounted for 3,567 or 14·6 per cent. of the total deaths from all causes. These deaths represented an increase of 84 as compared with 1945. The mortality rate is equivalent to 1·85 per 1,000 of the estimated civilian population or 0·05 less than in the previous year. The death-rate in the urban districts was 1·88 per 1,000, and 1·64 in the rural districts.

The table below gives the numbers of deaths assigned to cancer, together with the death-rates since 1900, the first year for which cancer records for the Administrative County are available. For comparative purposes, the rates for England and Wales are also given. The rates shown, both for the Administrative County and for England and Wales from 1939 onwards are calculated per 1,000 estimated civilian population:—

Year	No. of deaths	Death-rate per 1,000 pop'n		Year	No. of deaths	Death-rate per 1,000 pop'n	
		Administra-tive County	England and Wales			Administra-tive County	England and Wales
1900	1,072	0·54	0·90	1924	2,182	1·22	1·29
1901	1,149	0·62		1925	2,273	1·27	1·33
1902	1,113	0·60		1926	2,312	1·29	1·36
1903	1,223	0·65		1927	2,411	1·33	1·37
1904	1,229	0·65		1928	2,514	1·38	1·42
1905	1,164	0·65		1929	2,560	1·41	1·43
1906	1,214	0·69		1930	2,564	1·41	1·45
1907	1,254	0·70		1931	2,705	1·49	1·48
1908	1,283	0·71		1932	2,688	1·49	1·51
1909	1,374	0·75		1933	2,689	1·48	1·52
1910	1,333	0·74		1934	2,746	1·51	1·56
1911	1,493	0·86	0·99	1935	2,835	1·55	1·58
1912	1,466	0·83		1936	2,954	1·60	1·62
1913	1,618	0·93		1937	2,960	1·59	1·63
1914	1,668	0·95		1938	3,084	1·63	1·66
1915	1,577	0·94		1939	3,087	1·62	1·63
1916	1,728	1·06		1940	3,058	1·60	1·72
1917	1,713	1·09		1941	3,167	1·65	1·78
1918	1,727	1·12		1942	3,333	1·76	1·83
1919	1,793	1·07		1943	3,285	1·77	1·90
1920	1,880	1·08		1944	3,486	1·89	1·90
1921	1,981	1·12		1945	3,483	1·90	1·93
1922	2,063	1·16		1946	3,567	1·85	*1·84
1923	2,076	1·17					

* Provisional figure.

The cancer death-rate for each County district for the year 1946 is given in Table 2, pages 76 to 83.

In interpreting the crude mortality figures for cancer, two important factors affecting the increase should be borne in mind, i.e., the increasing longevity of the population and greater accuracy in the diagnosis of the disease. It should be remembered, also, that the death-rates are crude rates and are not standardised or corrected for the age and sex constitution of the population of the County.

It will be noted from the above table that the County death-rate from cancer is 0·01 greater than the provisional figure for the country as a whole. Only once before, i.e., in 1931, has this been the case.

The following table shows the number of cancer deaths in the County area in certain age periods and by sex during 1946 compared with the previous year and with the last pre-war year, 1938:—

Age groups — Years	1938			1945			1946		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0—	—	3	3	3	2	5	3	3	6
5—	5	3	8	3	4	7	4	3	7
15—	83	143	226	98	160	258	106	145	251
45—	593	730	1,323	628	726	1,354	693	782	1,475
65—	735	789	1,524	913	946	1,859	902	926	1,828
All ages	1,416	1,668	3,084	1,645	1,838	3,483	1,708	1,859	3,567

Since 1940, the Registrar-General in supplying statistics of cancer deaths, has classified them according to the sites affected. The following table shows the site incidence of the cancer deaths in the Administrative County during 1946 as compared with the two previous years:—

Site affected	Sex	1944					1945					1946				
		All ages	0—	15—	45—	65—	All ages	0—	15—	45—	65—	All ages	0—	15—	45—	65—
Buccal cavity and oesophagus	M.	202	—	3	59	140	181	1	3	46	131	143	—	1	33	109
Uterus	F.	211	—	16	122	73	210	1	16	117	76	198	—	16	124	58
Stomach and duodenum.....	M.	373	—	31	157	185	387	—	21	160	206	372	—	21	163	188
	F.	299	—	18	113	168	314	—	20	106	188	325	—	10	112	203
Breast	M.	2	—	—	2	—	4	—	—	2	2	3	—	—	2	1
	F.	352	—	32	158	162	367	1	42	148	176	378	—	44	175	159
All other sites	M.	1,098	7	74	457	560	1,073	5	74	420	574	1,190	7	84	495	604
	F.	949	8	80	382	479	947	4	82	355	506	958	6	75	371	506
All sites—Total	M.	1,675	7	108	675	885	1,645	6	98	628	913	1,708	7	106	693	902
	F.	1,811	8	146	775	882	1,838	6	160	726	946	1,859	6	145	782	926

Mention is made on page 25 of the work done in 1946 under the scheme of the Lancashire Public Assistance Committee which has been in operation in the Administrative County for some years.

INTRA-CRANIAL VASCULAR LESIONS.—The number of deaths assigned to this condition showed an increase of 96 over the figure for the previous year. The 2,929 fatalities were equivalent to a death-rate of 1·52 per 1,000 of the population and represented 12·0 per cent. of the deaths from all causes. In 1941 the mortality rate was 1·54.

Here again, this condition is one which principally affects older people and an examination of Table 4, page 89, reveals that of the 2,929 deaths, 2,202 or 75·1 per cent. were of persons of 65 years of age and over.

BRONCHITIS.—Bronchitis is becoming relatively more important as a cause of death in the Administrative County. The deaths registered in 1946 as due to this disease numbered 1,541. This figure, although 156 less than in the previous year, was more than twice that for 1938, when the disease was eleventh only

in the list of principal causes of death as compared with fourth in 1946. The 1,541 deaths were equivalent to a mortality rate of 0·80 per 1,000 of the estimated civilian population and represented 6·3 per cent. of the deaths from all causes. The mortality rates in the urban and rural districts were 0·84 and 0·55 per 1,000 population respectively. Of the 1,541 deaths, 991 or 64·3 per cent. were persons aged 65 years and over.

VIOLENCE.—Violence, which here includes road traffic accidents and suicides, was responsible for 877 deaths or 32 fewer than in the previous year. The equivalent death-rate was 0·45 per 1,000 estimated civilian population. Of the total deaths from all causes, this cause accounted for 3·6 per cent.

CONGENITAL MALFORMATIONS, BIRTH INJURY, INFANTILE DISEASE AND PREMATURE BIRTH.—There was an increase of 130 in the number of deaths assigned to this group in 1946. The deaths registered numbered 1,031 as compared with 901 in the previous year, and were equivalent to 4·2 per cent. of the total deaths from all causes. Expressed in terms of 1,000 of population the number of deaths was equivalent to a rate of 0·53. From this group of causes 980 deaths were of infants under one year of age and represented 58·8 per cent. of all infant deaths during 1946.

TUBERCULOSIS.—*Pulmonary.*—The deaths registered during 1946 as due to tuberculosis of the respiratory system numbered 751 or 42 more than in the previous year, and were equivalent to a death-rate of 0·39 per 1,000 of the estimated population. The rate in the urban districts was 0·40 and that in the rural districts 0·32.

The death-rate of 0·38 in 1945 was the lowest ever recorded in the County statistics.

Below are given the County death-rates from pulmonary tuberculosis for the years 1938-46. For comparative purposes the rates for England and Wales are also given. The death-rates for the County areas and for England and Wales from 1939 onwards are calculated per 1,000 estimated civilian population:—

Year	Administrative County			England & Wales
	Death-rate per 1,000 of population			Death-rate per 1,000 of population
	Urban	Rural	County	
1938	0·46	0·20	0·42	0·53
1939	0·44	0·29	0·42	0·52
1940	0·48	0·31	0·46	0·59
1941	0·46	0·27	0·43	0·60
1942	0·43	0·26	0·41	0·54
1943	0·43	0·29	0·41	0·56
1944	0·44	0·28	0·42	0·52
1945	0·40	0·28	0·38	0·52
1946	0·40	0·32	0·39	*0·46

* Provisional figure.

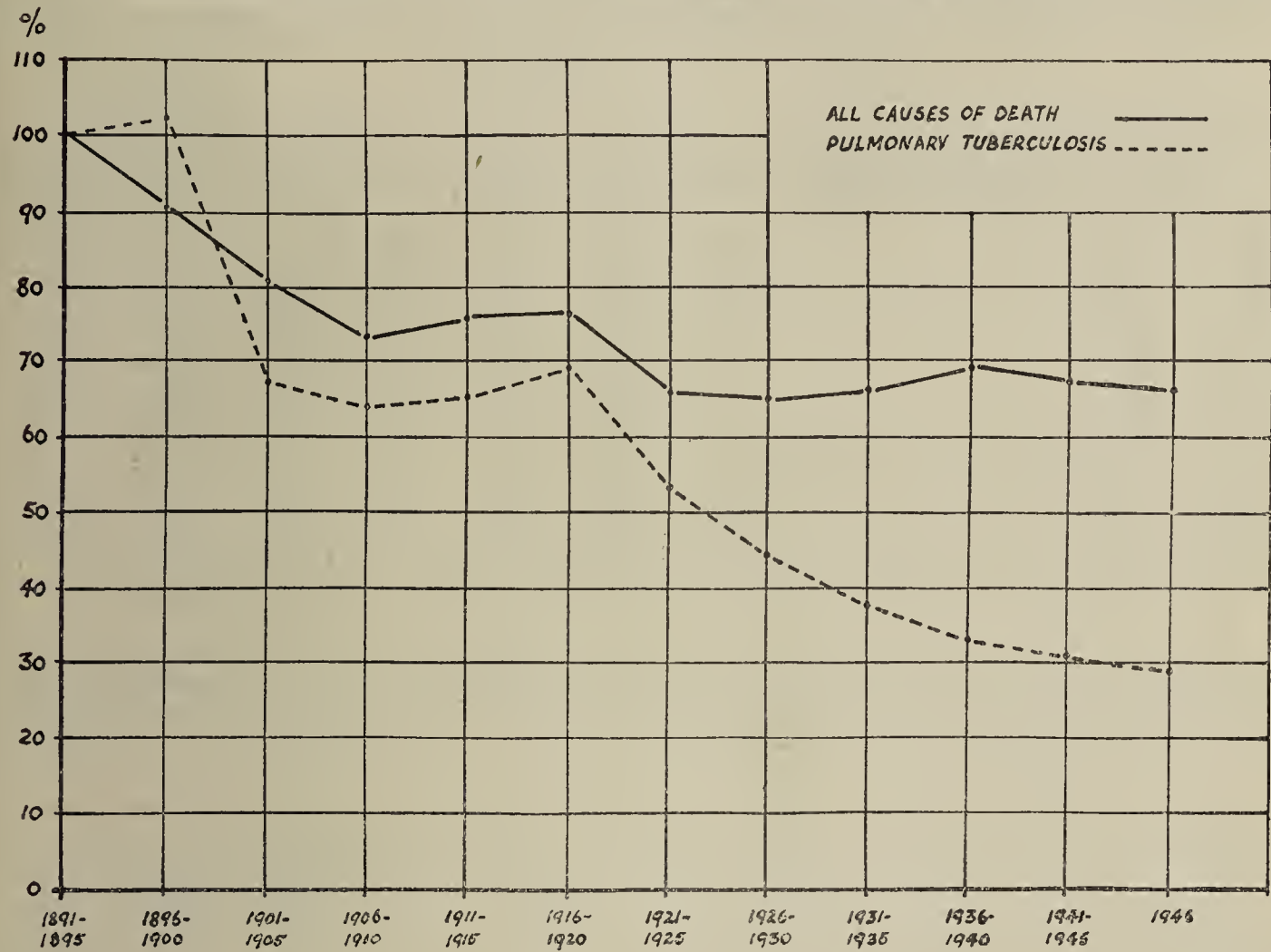
The following table shows the male and female deaths from this disease at various age periods during 1946, compared with the previous year and the year 1938:—

Year	Age periods—years.													
	All ages		0—		1—		5—		15—		45—		65—	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1938	472	330	—	—	2	1	—	9	255	248	183	62	32	10
1945	436	273	1	—	2	2	5	6	192	207	185	39	51	19
1946	462	289	—	3	3	—	4	5	211	220	192	46	52	15

The death-rate from pulmonary tuberculosis (classified as “tuberculosis of the respiratory system”) for each urban and rural district in the County area in the year 1946, is given in Table 2, pages 76 to 83, and the deaths in each district ascribed to this disease are shown in Table 3, pages 84 to 88.

The graph reproduced below shows the relative decline over the past 56 years of the mortality from pulmonary tuberculosis as compared with that from all causes. It will be seen that, since the turn of the century and with the exception of the period of the first world war, the mortality from tuberculosis of the respiratory system has steadily fallen and at a much more rapid rate than the general death-rate.

Graph showing the death-rates from All Causes and from Pulmonary Tuberculosis for quinquennial periods expressed as percentages of the rates for the five years, 1891-95.



Non-pulmonary.—The deaths in 1946 from non-pulmonary tuberculosis numbered 154 or 0.08 per 1,000 of the population. This rate is the same as that for 1945.

The table below analyses in age groups the deaths from this cause during 1946. The figures for the previous year and also 1938 are given for comparison:—

Year	Age periods—years													
	All ages		0—		1—		5—		15—		45—		65—	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1938	91	86	7	6	17	24	10	7	36	32	12	13	9	4
1945	75	86	7	3	22	24	19	17	15	26	8	11	4	5
1946	82	72	1	3	32	14	10	14	22	25	11	12	6	4

TRANSFERABLE DEATHS.—During the year under report the following “transfers” were made:— 7,293 persons, having a fixed or usual residence in the Administrative County, died in a district other than that in which they resided, and these (known as inward transfers) have been allocated to their proper districts; 7,016 deaths occurring in County districts of persons not belonging thereto were transferred to the areas to which they belonged.

Maternal Mortality.—There was a very considerable reduction in the number of maternal deaths in the Administrative County during 1946. Those assigned to puerperal and post-abortive sepsis numbered 13, and those due to other maternal causes 39—a total of 52. The corresponding figures for the previous year were 14, 59 and 73 respectively. The 52 deaths in 1946 were equivalent to a mortality rate of 1.42 per 1,000 total (live and still) births which was 0.90 below the rate for 1945 and is the lowest rate ever recorded in the Administrative County. Compared with the average rate for the previous five years, 1941-45, it shows a reduction of 1.18 per 1,000 total births.

It is a matter of gratification that there should be such a substantial decrease in the maternal mortality rate and especially so when it is remembered that during 1946 the maternity hospitals and homes were taxed to their utmost capacity, both as regards beds and staffs.

The following table gives particulars of the mortality of women in or associated with childbirth per thousand total births (live and still) during 1946 and the previous 10 years. The County rates are contrasted with those for England and Wales:—

Year	Administrative County							England and Wales		
	No. of total births (live & still)	No. of deaths			Mortality per 1,000 total births			Mortality per 1,000 total births		
		Puerperal and post-abortive sepsis	Other maternal causes	Total	Puerperal and post-abortive sepsis	Other maternal causes	Total	Puerperal and post-abortive sepsis	Other maternal causes	Total
1936	26,480	40	90	130	1.51	3.39	4.90	1.34	2.31	3.65
1937	26,961	35	100	135	1.29	3.71	5.00	0.94	2.19	3.13
1938	27,945	26	75	101	0.93	2.68	3.61	0.86	2.11	2.97
1939	*28,406	26	81	107	0.91	2.85	3.76	1.02	2.11	3.13
1940	*28,784	32	66	98	1.11	2.29	3.40	0.81	1.86	2.68
1941	*29,861	24	73	97	0.80	2.44	3.24	0.83	1.96	2.80
1942	31,314	30	53	83	0.95	1.69	2.65	0.77	1.71	2.48
1943	33,272	27	61	88	0.81	1.83	2.64	0.73	1.55	2.29
1944	35,319	17	60	77	0.48	1.69	2.18	0.59	1.33	1.92
1945	31,426	14	59	73	0.44	1.87	2.32	0.49	1.30	1.79
1946	36,601	13	39	52	0.35	1.06	1.42	†0.31	†1.12	†1.43

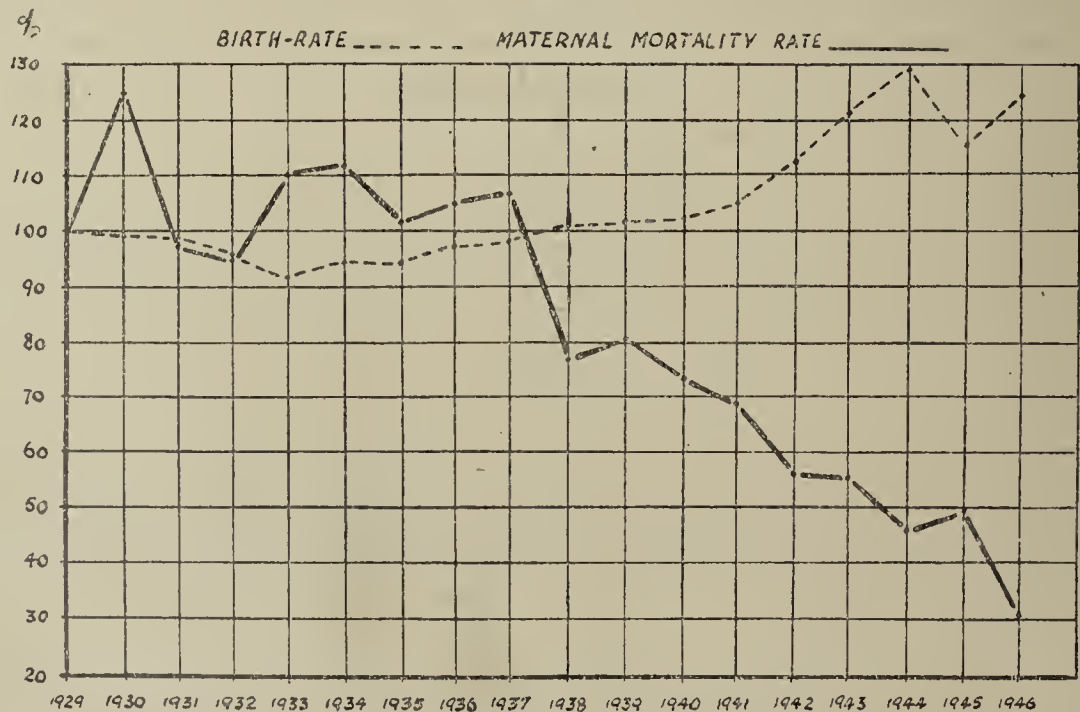
* Specially compiled figures for the calculation of maternal mortality rates. † Provisional figures.

It will be particularly noted from the above table that the total maternal mortality rate for the Administrative County in 1946 is below that for the whole of England and Wales. Never before has this been the case. By this fact alone can be judged the progress which has been made in the maternity services of the County especially when it is borne in mind that only 10 years ago approximately five in every 1,000 women died in childbirth.

Below, as a matter of interest, is inserted a small graph showing for each year since 1929, the maternal mortality rate of the Administrative County expressed as a percentage of what it was in 1929. It will readily be seen that in 1946, the rate was but 30.5 per cent. of that which applied 18 years ago.

Incorporated in the graph is also the total (live and still) birth-rate for each year in the same period expressed as a percentage of the rate for 1929. When the maternal mortality rate and the birth-rate are regarded together the improvement in the former rate is more than ever apparent, for such improvement can be seen to have been effected despite an increased number of confinements.

Graph showing the birth-rate (live and still) and the maternal mortality rate for each year since 1929 expressed as percentages of the respective rates for the year 1929.



The maternal mortality rate for the County urban districts in 1946 was 1.25 per 1,000 total births, a decrease of 1.04 compared with the previous year. The rate for the rural districts at 2.53 per 1,000 total births was, however, 0.03 higher than in 1945. The average rates for the five years 1941-45 were: urban districts 2.59, rural districts 2.69.

The maternal mortality rate for each County district for the year 1946 is given in Table 2, pages 76 to 83.

Investigation of Maternal Deaths.—The Minister of Health considers that it is still necessary to investigate each maternal death as a matter of routine. In the County area every maternal death is investigated by an experienced medical officer. In 80 County districts these investigations are undertaken by the Assistant County Medical Officers of Health and in the remaining 29 districts the investigations are carried out by the local Medical Officers of Health. A confidential report prepared on the facts and circumstances of each fatality is forwarded to the Ministry of Health.

Infant Mortality.—Deaths of infants under one year of age registered in the Administrative County during 1946 numbered 1,664—an increase of 139 over the previous year. Despite this increase, the infant mortality rate of 46 per 1,000 live births yielded by these deaths was four per 1,000 lower than in 1945 and equalled the record low level attained in 1944. Compared with the average rate for the five years, 1941-45, it showed an improvement of six per 1,000 live births.

Of the total deaths at all ages, infant deaths in 1946 formed 6·85 per cent.

An analysis of the causes of infant mortality during the last 10 years is given in the following table:—

Causes of infant deaths.	No. of deaths of infants under 1 year.									
	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Total—All Causes	1,613	1,463	1,549	1,636	1,754	1,593	1,735	1,594	1,525	1,664
Measles	8	21	1	25	15	9	5	13	7	3
Scarlet fever	—	2	1	—	—	—	—	—	—	—
Whooping cough	35	15	33	17	67	14	40	19	15	28
Diphtheria	1	—	3	4	4	2	1	3	1	4
Influenza	12	6	10	13	5	9	13	8	7	3
Cerebro-spinal fever	13	1	9	15	14	10	11	11	10	4
Tuberculosis of respiratory system	1	—	2	3	2	1	4	2	1	3
Other forms of tuberculosis	7	13	15	15	16	10	10	12	10	4
Bronchitis	55	46	54	83	71	54	73	48	40	52
Pneumonia (all forms)	235	195	176	253	304	244	320	222	246	236
Other respiratory diseases	3	4	4	4	10	3	4	5	6	7
Diarrhoea	89	69	92	97	112	140	155	127	167	195
Congenital malformations, birth injury, infantile disease and premature birth.....	972	921	982	928	918	917	918	922	849	980
All other causes	182	170	167	179	216	180	181	202	166	145
DEATH RATES—										
Per 1,000 live births	62	55	57	59	61	52	54	46	50	46
Per 1,000 estimated population	0·86	0·77	0·81	0·86	0·91	0·84	0·93	0·86	0·83	0·86

It will be observed from the above table that after a considerable decrease in 1945, the number of deaths of infants classified as due to congenital malformations, birth injury, infantile disease and premature birth rose sharply in 1946 to 980—almost what it was in 1939—and equivalent to 58·8 per cent. of the total infant deaths. A rise during recent years in the number of infant deaths due to diarrhoea is also apparent. A similar trend is noticeable in the figures for the country as a whole.

It is interesting to study Table 1 on page 75 and the graph inserted opposite to it. These show the trend of the infant mortality rate since 1889—the first year for which County statistics are available. In 1893 the deaths of infants were equivalent to 177 per 1,000 live births as compared with 46 per 1,000 live births in 1946—a reduction of 74 per cent. The significance of this is perhaps best illustrated by applying the 1893 rate to the live births in 1946, by which means it will be seen that the number of children dying before their first birthday would have been 6,277 instead of the actual figure of 1,664.

It will also be noticed from the graph that with very few exceptions the infant death-rate for the Administrative County is usually slightly greater than that for the country as a whole.

The following table gives the County, urban and rural infant death-rates per 1,000 live births for 1946 and the preceding 10 years. The rates for England and Wales per 1,000 *related* live births are also given:—

	Rate of deaths of children under 1 year per 1,000 live births										
	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Urban Districts	59	64	55	57	60	62	54	55	47	51	46
Rural Districts	47	51	53	52	50	51	44	47	41	43	48
Administrative County	58	62	55	57	59	61	52	54	46	50	46
England and Wales	59	58	53	50	56	60	50	49	45	46	*43

* Provisional figure.

The rate of 46 per 1,000 live births for the urban areas of the County is the lowest ever recorded.

MORTALITY OF ILLEGITIMATE INFANTS.—The table below shows the differential incidence of mortality during 1946 and the preceding five years amongst legitimate and illegitimate infants under one year of age in the urban and rural districts and the Administrative County:—

Year	Mortality per 1,000 live births								
	Urban Districts			Rural Districts			Administrative County		
	Legitimate infants	Illegitimate infants	Total	Legitimate infants	Illegitimate infants	Total	Legitimate infants	Illegitimate infants	Total
1941	61	100	62	52	23	51	59	91	61
1942	52	83	54	42	91	44	51	84	52
1943	53	89	55	46	93	47	52	90	54
1944	45	78	47	40	42	41	45	74	46
1945	49	70	51	41	71	43	48	71	50
1946	45	74	46	48	50	48	45	72	46

GENERAL PROVISION OF HEALTH SERVICES FOR THE COUNTY

Hospital Accommodation for Smallpox and Other Infectious Diseases.—The table below shows the nature of the hospital accommodation, both for smallpox and other infectious diseases, provided in, or available for, each County sanitary district:—

HOSPITAL ACCOMMODATION for Smallpox and other Infectious Diseases.
(Extracted from the local health reports)

DISTRICT.	Nature of Hospital Accommodation.	
	For infectious diseases other than smallpox.	For smallpox.
Abram	Joint with Leigh Joint Hospital Board (Astley) for all purposes.	
Accrington (B)	Agreement with Bury and District Joint Hospital Board (Florence Nightingale)	Own hospital.
Adlington	Joint with Chorley and District Joint Hospital Board for all purposes. (Heath Charnock)	(Finnington)
Ashton-in-Makerfield	Agreement with Leigh Joint Hospital Board (Astley) for all purposes.	
Ashton-under-Lyne (B)	Agreement with Hyde (B).	Joint with Ashton and District Joint Hospital (Hartshead).
Aspull	Joint with Horwich Joint Hospital Board (Fall Birch)	Agreement with Bury and District Joint Hospital Board.
Atherton	Joint with Leigh Joint Hospital Board (Astley) for all purposes.	
Audenshaw	Agreement with Hyde (B).	Joint with Ashton and District Joint Hospital (Hartshead).
Bacup (B)	Agreement with Bury and District Joint Hospital Board (Florence Nightingale)	Joint with Todmorden (Sourhall).
Barrowford	Joint with Burnley C.B. (Kibble Bank)	Joint with Burnley C.B. (Crown Point).
Billinge and Winstanley	Agreement with Ormskirk	Old Cottage, Crank Road (since closed).
Blackrod	Joint with Horwich (Fall Birch)	Nil.
Brierfield	Joint with Burnley C.B. (Kibble Bank)	Joint with Burnley C.B. (Crown Point).
Carnforth	Joint with Lancaster Joint Hospital Board (Slyne Road)	Agreement with Fylde Joint Hospital Board (Elswick).
Chadderton	Arrangements with Oldham C.B. and Manchester C.B.	Joint with Middleton, etc., Joint Board (Racefield) (leased to County Council for tuberculosis).
Chorley (B)	Joint with Chorley and District Joint Hospital Board (Heath Charnock)	Arrangement with Blackburn C.B. (Finnington).
Church	Arrangement with Darwen (B) (Bull Hill)	Arrangement with Accrington (B).
Clayton-le-Moors	Agreement with Darwen (B) (Bull Hill)	Agreement with Accrington (B).
Clitheroe (B)	Agreement with Darwen (B) (Bull Hill)	Agreement with Blackburn C.B. (Finnington).
Colne (B)	Joint with Burnley C.B. (Kibble Bank)	Joint with Burnley C.B. (Crown Point).
Crompton	Arrangements with Oldham C.B. and Manchester C.B.	Joint at Racefield (see Chadderton).
Crosby (B)	Agreement with Liverpool C.B.	Agreement with Birkenhead C.B.
Dalton-in-Furness	Joint with Ulverston Joint Hospital Board (High Carley)	Arrangement with Barrow-in-Furness C.B.
Darwen (B)	Own hospital (Bull Hill)	Agreement with Blackburn C.B.
Denton	Agreement with Hyde (B).	Agreement with Hyde (B).
Droylsden	Agreement with Manchester C.B.	Agreement with Ashton and District Joint Hospital (Hartshead).
Eccles (B)	Agreement with Salford C.B. (Ladywell)	Agreement with Manchester C.B.
Failsworth	Arrangements with Manchester C.B. and Oldham C.B.	Joint with Ashton and District Joint Hospital (Hartshead).
Farnworth (B)	Arrangements with Bolton C.B. and Salford C.B.	Agreement with Bury and District Joint Hospital Board.
Fleetwood (B)	Joint with Fylde and District Joint Hospital Board for all purposes. (Moss Side)	(Elswick)
Formby	Arrangement with Liverpool C.B.	Arrangement with Liverpool C.B.
Fulwood	Joint at Fulwood	Joint with Fylde Joint Board (Elswick).
Golborne	Joint with Leigh Joint Hospital Board (Astley) for all purposes.	
Grange	Arrangement with Ulverston Joint Hospital Board (High Carley)	Arrangement with Barrow-in-Furness C.B.
Great Harwood	Agreement with Darwen (B) (Bull Hill)	Agreement with Blackburn C.B. (Finnington).
Haslingden (B)	Agreement with Bury and District Joint Hospital Board for all purposes. (Florence Nightingale)	
Haydock	Agreement with Newton-le-Willows	Nil.
Heywood (B)	Agreement with Rochdale C.B.	Agreement with Bury and District Joint Hospital Board.
Hindley	Agreement with Leigh and District Joint Hospital Board (Astley) for all purposes.	
Horwich	Joint at Fall Birch	Agreement with Bury and District Joint Hospital Board.
Huyton-with-Roby	Joint at Whiston (Delph Lane)	Arrangement with Birkenhead C.B.
Ince-in-Makerfield	Agreement with Leigh and District Joint Hospital Board (Astley) for all purposes.	
Irlam	Agreement with Salford C.B. (Ladywell)	Agreement with Manchester C.B.
Kearsley	Joint at Leigh and District Joint Hospital Board (Astley) for all purposes.	
Kirkham	Joint with Fylde and District Joint Hospital Board for all purposes. (Moss Side)	(Elswick)
Lancaster (B)	Joint at Slyne Road	Arrangement with Fylde Joint Board (Elswick).
Lees	Arrangement with Oldham C.B.	Agreement with Middleton, etc., Joint Board (Racefield) (see Chadderton).
Leigh (B)	Joint at Leigh and District Joint Hospital Board (Astley) for all purposes.	
Leyland	Joint with Chorley and District Joint Board (Heath Charnock)	Agreement with Blackburn C.B. (Finnington).
Litherland	Agreement with Bootle C.B.	Agreement with Bootle C.B.
Littleborough	Joint at Smithy Bridge	Agreement with Bury Joint Hospital Board.
Little Lever	Agreement with Bury and District Joint Hospital Board for all purposes. (Florence Nightingale)	
Longridge	Joint at Fulwood	Joint with Fylde Hospital Board (Elswick).

HOSPITAL ACCOMMODATION (*continued*)

DISTRICT.	Nature of Hospital Accommodation.	
	For infectious diseases other than smallpox.	For smallpox.
Lytham St. Annes (B)	Joint with Fylde and District Joint Hospital Board. (Moss Side)	(Elswick)
Middleton (B)	Agreement with Rochdale C.B. (Marland)	Joint at Racefield (see Chadderton).
Milnrow	Joint at Littleborough (Smithy Bridge)	Agreement with Bury Joint Hospital Board.
Morocambe and Heysham (B)	Joint at Slyne Road, Lancaster	Arrangement with Fylde Joint Hospital Board (Elswick)
Mossley (B)	Agreement with Hyde (B)	Agreement with Ashton and District Joint Board (Hartshead).
Nelson (B)	Joint with Burnley C.B. (Kibble Bank)	Joint with Burnley C.B. (Crown Point)
Newton-le-Willows	Own hospital	Agreement with Liverpool C.B.
Ormskirk	Own hospital	Agreement with Liverpool C.B.
Orrell	Arrangement with Wigan C.B.	Arrangement with Bury Joint Hospital Board.
Oswaldtwistle	Arrangement with Darwen (B)	Arrangement with Accrington Joint Board.
Padiham	Joint with Burnley C.B. (Kibble Bank)	Joint with Burnley C.B. (Crown Point)
Poulton-le-Fylde	Joint with Fylde Hospital Board for all purposes. (Moss Side)	(Elswick).
Precsall	Arrangement with Blackpool C.B.	Joint with Fylde Hospital Board (Elswick).
Prescot	Joint with Whiston (Delph Lane)	Agreement with Liverpool C.B.
Prestwich (B)	Joint with Bury and District Joint Hospital Board for all purposes. (Florence Nightingale)	
Radcliffe (B)	Joint with Bury and District Joint Hospital Board for all purposes. (Florence Nightingale)	
Rainford	Arrangement with Ormskirk	Arrangement with Liverpool C.B.
Ramsbottom	Joint with Bury and District Joint Hospital Board for all purposes. (Florence Nightingale)	
Rawtenstall (B)	Agreement with Bury and District Joint Board (Florence Nightingale)	Own hospital.
Rishton	Agreement with Burnley C.B.	Nil
Royton	Arrangements with Manchester C.B., Old- ham C.B. and Littleborough Joint Hospital (Smithy Bridge)	Joint at Racefield (see Chadderton).
Skelmersdale	Agreement with Ormskirk	Agreement with Liverpool C.B.
Standish-with-Langtree	Agreement with Wigan C.B.	Agreement with Blackburn C.B.
Stretford (B)	Agreement with Salford C.B. (Ladywell)	Agreement with Bury & District Joint Board.
Swinton & Pendlebury (B)	Joint with Leigh Joint Hospital Board (Astley) for all purposes.	
Thornton Cleveleys	Joint with Fylde Joint Hospital Board for all purposes. (Moss Side)	(Elswick).
Tottington	Joint with Bury and District Joint Hospital Board for all purposes. (Florence Nightingale)	
Trawden	Joint with Burnley C.B. (Kibble Bank)	Joint with Burnley C.B. (Crown Point).
Turton	Agreement with Bury Joint Board and Darwen (B)	Agreement with Bury Joint Board.
Tyldesley	Joint with Leigh and District Joint Hospital Board (Astley) for all purposes.	
Ulverston	Joint with Ulverston and District Joint Board (High Carley)	Arrangement with Barrow-in-Furness C.B.
Upholland	Agreement with Wigan C.B.	Nil.
Urmston	Agreement with Salford C.B. (Ladywell)	Agreement with Bury Joint Hospital Board.
Walton-le-Dale	Joint at Fulwood	Joint with Fylde Joint Board (Elswick).
Wardle	Joint at Littleborough (Smithy Bridge)	Agreement with Bury Joint Board.
Westhoughton	Joint at Horwich (Fall Birch)	Arrangement with Bury Joint Board.
Whitefield	Joint with Bury and District Joint Hospital Board for all purposes.	
Whitworth	Agreement with Rochdale C.B.	Agreement with Bury Joint Board.
Widnes (B)	Own hospital	Agreement with Liverpool C.B.
Withnell	Agreement with Chorley Joint Hospital Board for all purposes. (Heath Charnock)	(Finnington).
Worsley	Joint with Leigh and District Joint Hospital Board (Astley) for all purposes.	
RURAL DISTRICTS.		
Blackburn	Agreement with Darwen (B)	Agreement with Blackburn C.B.
Burnley	Joint with Burnley C.B. (Kibble Bank)	Joint with Burnley C.B. (Crown Point).
Chorley	Joint with Chorley and District Joint Hospital Board for all purposes. (Heath Charnock)	(Finnington).
Clitheroe	Agreement with Darwen (B) (Bull Hill)	Agreement with Blackburn C.B. (Finnington).
Fylde	Joint with Fylde and District Joint Hospital Board for all purposes. (Moss Side)	(Elswick).
Garstang	Agreement with Fylde Joint Board (Moss Side)	Joint with Fylde Joint Board (Elswick).
Lancaster	Joint with Lancaster and District Joint Hospital Board (Slyne Road)	Agreement with Fylde Joint Hospital Board (Elswick).
Limehurst	Arrangements with Oldham C.B. and Hyde (B)	Joint with Ashton and District Joint Board (Hartshead).
Lunesdale	Arrangement with Lancaster Joint Board (Slyne Road)	Arrangement with Fylde Joint Board (Elswick).
Preston	Joint at Fulwood	Joint with Fylde Joint Board (Elswick).
Ulverston	Joint with Ulverston Joint Board (High Carley)	Arrangement with Barrow-in-Furness C.B.
Warrington	Arrangement with Warrington C.B. for all purposes.	
West Lancashire	Own hospital and arrangement with Orms- kirk	Agreement with Liverpool C.B.
Whiston	Joint at Delph Lane, Whiston	Agreement with Liverpool C.B.
Wigan	Agreement with Wigan C.B.	Agreement with Bury and District Joint Hospital Board.

Summarised, the position of the Administrative County as regards hospital accommodation for smallpox and other infectious diseases is shown in the following statement:—

	For smallpox.	For infectious diseases other than smallpox
No. of districts with their own hospital	3	5
No. of districts who are constituent members of Joint Hospital Boards or Committees	43	52
No. of districts using hospitals within the Adminis- trative County belonging to Councils of County districts	2	11
No. of districts using hospitals of Joint Hospital Boards or Committees	30	11
No. of districts using hospitals belonging to Lanca- shire County Boroughs	26	25
No. of districts using hospitals outside the Geog- raphical County	1	4
No. of districts using more than one type of hospital	—	1
No. of districts without hospital accommodation	4	—

The four districts stated to have no arrangements for hospital accommodation for smallpox are:—

Blackrod. Haydock. Rishton. Upholland.

GRANTS TO LOCAL AUTHORITIES TOWARDS COST OF TREATMENT OF CASES OF INFECTIOUS DISEASE IN HOSPITAL.—As from 1st April, 1936, the County Council decided to make grants to local authorities in the Administrative County towards the cost of hospital treatment of infectious diseases, subject in each case to compliance with any conditions laid down by the Public Health and Housing Committee, on the basis of £3 per case removed to hospital in or from the several County districts. The amount of grant paid each year since that date is shown in the following table:—

Year	Amount of Grant £	Year	Amount of Grant £
1936 (9 months)	12,729	1942	17,358
1937	17,277	1943	20,016
1938	22,533	1944	18,393
1939	17,853	1945	15,027
1940	16,701	1946	10,389
1941	18,468		

County Council Hospitals.—During the year 1946, the hospitals under the control of the County Council numbered 18. These hospitals provided 4,350 beds, excluding 1,380 for mental patients and 1,710 for the aged and infirm. Four of these were administered by the Public Health and Housing Committee, viz., Park Hospital, Davyhulme; the County Hospital, Whiston; Abbotsfield Hospital, Flixton, and the Rossall Hospital, Fleetwood. Abbotsfield Hospital, which had been established during the war to deal with acute cases whilst Park Hospital was occupied by the military authorities, was closed on the 18th February, 1946. The remaining 14 hospitals and institutions are under the control of the Public Assistance Committee. Three hospitals are recognised by the General Nursing Council as complete training schools for nurses and by the Central Midwives Board as Part I training schools for pupil midwives. Two institutions are also recognised by the Central Midwives Board as Part II training schools for pupil midwives. In addition, three institutions have already been approved by the General Nursing Council as training schools for assistant nurses and five further institutions are awaiting such approval.

PARK HOSPITAL, DAVYHULME.

Admissions.

No. of cases (excluding maternity) admitted during the year ended 31st December, 1946 2,262

Operations.

No. of operations performed during 1946 1,709

Out-patient Department.

	New cases	Re-visits	Total
Attendances during 1946	3,943	9,530	13,473

Note : This hospital was occupied by the Military Authorities until the latter part of 1945.

In accordance with arrangements made with the City of Salford 851 cases (excluding maternity) were admitted to Hope Hospital, Pendleton, during 1946, compared with 1,327 cases in 1945. These cases would normally have been admitted to the Park Hospital, Davyhulme.

COUNTY HOSPITAL, WHISTON.

<i>Admissions.</i>	Year 1945	Year 1946
No. of cases (excluding maternity) admitted	7,994	7,538

<i>Operations.</i>	Year 1945	Year 1946
No. of operations performed	2,637	5,032

Out-patient Department.

	New cases		Re-visits		Total	
	1945	1946	1945	1946	1945	1946
Attendances	7,817	8,214	25,676	29,955	33,493	38,269

Maternity.

Number of Maternity Beds provided and Summary of Maternity Admissions during the years 1945 and 1946.

Name of Institution.	Maternity beds provided		Maternity cases admitted		Confinements		Caesarean sections		Forceps deliveries		Maternal deaths		Number of births	
	1945	1946	1945	1946	1945	1946	1945	1946	1945	1946	1945	1946	1945	1946
Park Hospital, Davyhulme	—	64	—	1198	—	811	—	18	—	51	—	2	—	823
County Hospital, Whiston	84	72	1056	1510	956	1364	36	52	53	79	7	5	956	1385
Ulverston Institution	2	4	15	23	15	22	—	—	—	2	—	—	15	22
Parksido Institution, Lancaster	4	4	25	28	23	25	—	—	1	—	—	—	23	28
Fylde Institution, Kirkham	6	6	20	15	20	15	—	—	—	—	—	—	20	15
Chorley Institution	11	12	232	308	232	308	—	—	10	5	—	—	232	308
Coplow View Inst. Clitheroe	2	2	34	41	33	40	—	—	4	2	1	—	33	41
Moorlands Infirmary, Rawtenstall	25	25	509	536	439	447	23	18	40	48	2	3	448	451
County Hospital, Bury	44	44	758	905	751	875	19	23	43	69	1	3	758	875
County Hospital, Ormskirk	48	48	380	505	374	505	7	16	19	53	1	—	374	505
Leigh Institution	4	4	47	—	47	—	—	—	1	—	—	—	47	—
County Hospital, Ashton-under-Lyne	58	58	1643	1931	1372	1602	38	42	168	180	4	3	1372	1622
Total	288	343	4719	7000	4262	6014	123	169	339	489	16	16	4278	6075

	1945	1946
Maternal death-rate per 1,000 maternity cases admitted	3.4	2.3

In addition, 355 maternity cases were admitted to Hope Hospital, Pendleton, during the year 1945 and 75 during the year 1946. Financial responsibility for these cases was assigned as under:—

	1945	1946
Charged to Public Health Committee	198	36
Charged to the Maternity and Child Welfare Committee	46	5
Accepted by the Boroughs of Eccles, Leigh, Stretford, and Swinton and Pendlebury and the Urban District of Golborne	111	34
	<u>355</u>	<u>75</u>

The number of persons attending and the number of attendances made at maternity clinics held at Public Health Hospitals and Public Assistance Institutions during the years 1945 and 1946 are given below:—

Name of Institution	Number of persons attending		Attendances made		Sessions held during year	
	1945	1946	1945	1946	1945	1946
<i>Ante-natal Clinics</i>						
Park Hospital, Davyhulme	—	1,369	—	8,091	—	198
County Hospital, Whiston	575	988	1,480	3,557	73	74
Moorlands Infirmary, Rawtenstall	604	509	2,973	4,037	103	104
County Institution, Bury	699	852	6,215	7,553	155	156
Ormskirk County Hospital	380	503	2,019	3,009	52	50
County Hospital, Ashton-under-Lyne	1,329	1,802	8,427	9,594	364	364
Total	3,587	6,023	21,114	35,841	747	946
			1945	1946		
<i>Average number of attendances per person</i>			5.9	5.9		
<i>Average number of persons attending per session</i>			28.2	37.9		
<i>Post-natal Clinics</i>						
Park Hospital, Davyhulme	—	393	—	393	—	44
County Hospital, Whiston	30	—	30	—	12	—
Moorlands Infirmary, Rawtenstall	188	192	194	203	23	23
County Hospital, Bury	170	229	170	241	24	24
Ormskirk County Hospital	150	234	186	234	52	50
County Hospital, Ashton-under-Lyne	350	453	350	453	52	52
Total	888	1,501	930	1,524	163	193
			1945	1946		
<i>Average number of attendances per person</i>			1.0	1.0		
<i>Average number of persons attending per session</i>			5.8	7.9		

WORK DONE BY DISTRICT MEDICAL OFFICERS DURING YEARS 1945 AND 1946.

	1945	1946
Number of District Medical Officers	130	130
Total number of patients	20,583	16,701
Number of prescriptions issued	131,703	150,408
Number of persons who received:—		
Dental treatment	249	223
Spectacles	402	398
Insulin	89	69
Surgical appliances	220	210

Cancer.

Number of persons referred for treatment under the County Council's Cancer Scheme, during the years 1945 and 1946	65	100
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Summary of Cases Referred.

Referred by	Referred to							
	Christie Hospital				Liverpool Radium Institute			
	In-patients		Out-patients		In-patients		Out-patients	
	1945	1946	1945	1946	1945	1946	1945	1946
Medical Officers of Institutions	8	11	3	4	—	—	—	—
Medical Superintendents of Hospitals	2	17	5	15	13	22	29	24
District Medical Officers	4	3	1	3	—	—	—	1
Total	14	31	9	22	13	22	29	25

The number of cases referred for treatment to the Special Surgical Chest Unit at the Broadgreen Hospital, Liverpool, during the year ended 31st December, 1946, was 74 as compared with 52 in 1945.

Institutional Treatment.

The statement below shows the number of sick patients admitted to Lancashire Public Assistance Institutions during the years 1945 and 1946 (including mental patients, but excluding maternity, aged and infirm and E.M.S. cases):—

Name of Institution	Patients admitted	
	1945	1946
Ulverston Institution	250	216
Parkside Institution, Lancaster	522	441
Fylde Institution, Kirkham	666	569
Garstang Institution	20	—
Chorley Institution	369	297
Ribchester Institution	82	102
Coplow View Institution, Clitheroe	70	56
Moorlands Infirmary, Rawtenstall	1,093	687
Ormskirk County Hospital and Institution	935	923
County Hospital, Bury	2,110	1,201
Whiston County Institution	580	466
Leigh Institution	532	457
Green Lane Institution, Patricroft	678	529
County Hospital, Ashton-under-Lyne	2,045	1,447
Total	9,952	7,391

Tuberculosis.—The County Council, through the Tuberculosis Committee, have provided a comprehensive diagnostic and treatment scheme for the inhabitants of the Administrative County. Details of the sanatoria, hospitals and dispensaries and of the work carried out are given in the Annual Report of the Central Consultant Tuberculosis Officer.

Institutional Provision for Unmarried Mothers, Illegitimate Infants, and Homeless Children.—Institutional accommodation for these classes is available as under:—

Unmarried mothers and illegitimate infants.—Crosby (B)—St. Mary's C.E. Home and Legion of Mary Maternity Hostel; Eccles (B)—Ennismore House (Manchester Diocesan Association for Preventive and Rescue Work); Heywood (B)—Simpson Hill Maternity Home; Lancaster (B)—House of Help (Moral Welfare Association) and arrangement with Carlisle Diocesan Maternity Home, Kendal and Brethargh Holt, Kendal.

Homeless Children.—Billinge and Winstanley—Greenfield House (R.C. Authorities); Crosby (B)—St. Mary's C.E. Home and Nazareth House (R.C. Home); Fleetwood (B)—Orphanage, Esplanade; Heywood (B)—Simpson Hill Maternity Home; Kirkham (Cottage Homes); Lancaster (B)—Nazareth House; Lytham St. Annes (B)—Dr. Barnado's Home, St. Annes; Tottington—Holly Mount Institute (Sisters of Charity); Turton—National Children's Home and Orphanage; Blackburn (R)—Blackburn and District Orphanage, Wilpshire.

Nursing in the Home.—Domiciliary general nursing in the County is carried out almost entirely by District Nursing Associations. Most of the area of the Administrative County is so served.

In only a few areas are there arrangements for the domiciliary nursing of cases of infectious disease.

DISTRICT NURSING ASSOCIATIONS.—There are 148 District Nursing Associations in the Administrative County area, and in addition six Associations situated in adjacent County Boroughs undertake nursing in the County area. The total number of nurses employed by all Associations working in the County area is 272.

One hundred and forty-six of these Associations, employing 263 nurses, are affiliated to the Lancashire County Nursing Association; eight Associations, employing nine nurses, are not so affiliated.

Financial assistance is granted to District Nursing Associations by the Public Health and Housing Committee of the County Council under section 178 of the Public Health Act, 1936 at the rate of £12 per nurse. The following statement summarises the amounts disbursed in respect of the financial year 1947-48:

	£
Grants to District Nursing Associations affiliated to the Lancashire County Nursing Association	3,156
Grants to unaffiliated District Nursing Associations	108
Special grant to Huyton-with-Roby District Nursing Association	80
Grant to Lancashire County Nursing Association	400
Total	<u>£3,744</u>

The above grants are in respect of services other than maternity. For services rendered by Associations in connection with maternity in the area of the County Council as a Local Supervising Authority, the County Council make grants calculated to cover the whole cost of the Nursing Associations of providing the service.

In addition to the above, many local authorities render financial aid to the District Nursing Associations serving their areas, and during the year 1946, grants made by 35 District Councils totalled some £3,786.

Nurses' Salaries Committee (Rushcliffe Committee).—This Committee was appointed by the Minister of Health in 1941, and its Second Report, issued in December, 1943, contained recommendations in regard to the salaries, emoluments and conditions of service of district nurses and district nurse-midwives. The various categories of domiciliary nurses were defined and scales of salaries and emoluments recommended, together with proposals relating to transfer, promotion, professional expenses, etc. Further recommendations in regard to conditions of service sought to establish uniformity throughout the country upon hours of duty, leave, sick pay and similar matters.

The appointed date for the application of the terms of the Committee's report was 1st April, 1943; nurses in employment at the date of the issue of the report (December, 1943), were given the option of accepting the Rushcliffe recommendations or of remaining on their existing salary scales and conditions of service, but all new appointments or promotions after the issue of the Report were to be in accordance with the Rushcliffe Scheme.

In September, 1946, a supplementary report of the Nurses' Salaries Committee recommended increased salaries for district nurses and district nurse-midwives payable retrospectively from 1st January, 1946. In an accompanying circular the Minister of Health stated that he welcomed these further recommendations and commended them to employing authorities for adoption.

Of the 148 District Nursing Associations in the Administrative County, 140 have adopted the recommendations of the Rushcliffe Reports. The application of the Rushcliffe Scheme has imposed a considerable financial strain on the resources of many Associations, all of which are, to some extent, dependent upon voluntary subscriptions for their upkeep, and to lessen the burden the Minister of Health intimated that pending the settlement of the post-war health services, he was prepared to pay one-half of the additional expenditure incurred by District Nursing Associations in implementing the Committee's recommendations. The Exchequer grants have been distributed by County and County Borough Councils, acting on behalf of the Minister, and in this connection the County Council have disbursed a sum of £18,123 in respect of increased expenditure incurred during 1943/4 and 1944/5. Payments on account for 1945/6 and 1946/7 amounting to £7,077 and £11,564 respectively have also been made.

Nursing Homes.—The law relating to nursing homes is contained in sections 187-195 of the Public Health Act, 1936.

The County Council are the authority under the Act for the area of the Administrative County, but their powers and duties under the Act in respect of the undermentioned Municipal Boroughs have been delegated to the Councils thereof:—

Accrington	Darwen.	Morecambe & Heysham.
Ashton-under-Lyne.	Eccles.	Nelson.
Bacup.	Heywood.	Rawtenstall.
Chorley.	Lancaster.	Stretford.
Clitheroe.	Leigh.	Swinton & Pendlebury.
Colne.	Lytham St. Annes.	
Crosby.	Middleton.	

There are, at the present time (October, 1947), 32 registered nursing homes in the administrative area of the County Council and, according to the local reports, 20 in the above-mentioned autonomous districts.

All the nursing homes on the County register are from time to time re-inspected by Assistant County Medical Officers of Health, and during the year 61 such inspections took place.

The following is a summary of the action taken during 1946:—

Applications for registration received	.....	.....	.....	.....	.....	1
Certificates of registration issued	.....	.....	.....	.....	.....	1
Applications withdrawn	.....	.....	.....	.....	.....	2
Applications refused	.....	.....	.....	.....	.....	1
Applications under consideration at 31st December, 1946	.....	.....	.....	.....	.....	1
Certificates cancelled during the year	.....	.....	.....	.....	.....	1

The nursing homes are situated in the following districts:—

Carnforth	.....	.....	.....	.....	1	Ulverston	.....	.....	.....	.....	2
Denton	.....	.....	.....	.....	1	Urnington	.....	.....	.....	.....	1
Fleetwood (B)	.....	.....	.....	.....	2	Wardle	.....	.....	.....	.....	1
Formby	.....	.....	.....	.....	3	Widnes (B)	.....	.....	.....	.....	1
Grange	.....	.....	.....	.....	1	Worsley	.....	.....	.....	.....	1
Orrell	.....	.....	.....	.....	1	Blackburn (R)	.....	.....	.....	.....	1
Prestwich (B)	.....	.....	.....	.....	3	Burnley (R)	.....	.....	.....	.....	1
Radcliffe (B)	.....	.....	.....	.....	1	Lunesdale (R)	.....	.....	.....	.....	1
Thornton Cleveleys	.....	.....	.....	.....	3	Warrington (R)	.....	.....	.....	.....	3
Tottington	.....	.....	.....	.....	2	West Lancashire (R)	.....	.....	.....	.....	2

NURSES ACTS, 1943 AND 1945.—Part 2 of the 1943 Act requires that a person shall not carry on an agency for the supply of nurses on any premises in the area of the Licensing Authority unless he is the holder of a licence from that authority authorising him so to do on those premises. The County Council are the licensing authority in the Administrative County for this part of the Act, but their powers and duties have, in accordance with the provisions of section 11 of the Act, been delegated to the Councils of the Municipal Boroughs of Clitheroe, Colne, Heywood, Lancaster and Stretford.

To the end of 1946, only one agency—at Lytham St. Annes (B)—had been licensed.

Venereal Diseases.—The County Council scheme provides facilities for the diagnosis and treatment of venereal diseases.

DIAGNOSTIC FACILITIES.—Arrangements for the examination of specimens for Wassermann reaction and gonococci from cases or suspected cases have been made with the undermentioned laboratories:—

Manchester	.....	.....	The University of Manchester, Public Health Laboratory, York Place, Oxford Road.
Liverpool	.....	.....	The University of Liverpool, City Laboratories and School of Hygiene, Mount Pleasant.
Burnley	.....	.....	County Borough of Burnley Public Health Laboratory, Victoria Hospital.

In addition, the examination of similar types of specimens is undertaken at the E.M.S. Laboratory, High Carley Sanatorium, near Ulverston, in respect of the northern portion of the County covered by the domiciliary scheme.

Examinations of specimens from patients attending the County Council clinics at Chorley, Fleetwood and Lancaster are undertaken at the Chorley clinic by a part-time technician employed by the County Council.

Pathological outfits.—The following table sets out the number of pathological outfits supplied to medical practitioners by the County Health Department during the year 1946 compared with the four previous years:—

Pathological outfits for	1942	1943	1944	1945	1946
Wassermann test	3,057	3,884	3,659	3,755	5,364
Detection of spirochaeta pallida	3	—	—	—	—
Detection of gonococci	106	202	324	209	159
Total	3,166	4,086	3,983	3,964	5,523

TREATMENT FACILITIES.—These are mainly provided at treatment centres belonging to voluntary hospitals or County Boroughs. Three centres—at Chorley, Fleetwood and Lancaster—are provided directly by the County Council. In the northern part of the County a domiciliary scheme is in operation.

Work carried out at County Council treatment centres.—The table below shows the number of patients who attended for the first time at the three County Council treatment centres during 1946, together with contacts traced, etc. For comparative purposes the figures for 1945 are also given:—

	Gonorrhoea				Syphilis				Non-venereal diseases			
	1945		1946		1945		1946		1945		1946	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
*No. of patients attending	58	61	105	29	30	37	78	49	109	135	278	107
No. of patients notified twice	—	6	—	6	—	2	—	5	—	—	—	—
No. of patients notified once	1	5	—	1	—	—	1	1	—	3	—	3
No. of traced contacts	1	16	5	10	1	6	6	12	16	25	22	38

*Patients attending for the first time; patients who were transferred from other clinics are not included.

A comparison of the figures for 1946 with those for 1945 shows an increase in the number of male patients attending for the first time, and with the exception of syphilis, a decrease in the number of female patients. The difference in the figures is probably largely accounted for by the return to civil life of members of the forces. Doubtless a number of fresh infections of syphilis were brought into the country by soldiers returning from abroad.

Among the patients attending for non-venereal conditions were many ex-servicemen who had been treated in the forces, discharged as cured, and who came for control examination. A number of men who, whilst in the forces, had been advised of the importance of early treatment, attended the clinics after having exposed themselves to the risk of an infection.

The number of notifications under Regulation 33B has decreased since the end of the war. Most of the notifications received during 1946 related to members of the forces.

The importance of tracing contacts can be seen from the fact that from 93 contacts examined at the clinics approximately one-third were infected. The contacts were brought to the clinics usually by the co-operation of the infected person and the efforts of the Almoner.

Work carried out at other Treatment Centres.—The following table giving the attendances during the year 1946 is compiled from the Annual Returns, Form V.D.(R), of the Medical Officers of Treatment Centres:—

Treatment Centre	Number of County residents attending for the <i>first</i> time, and found to be suffering from:—				Total number of attendances of County residents
	Syphilis	Soft chancre	Gonorrhoea	Non-venereal and undiagnosed conditions	
Ashton-under-Lyne District Infirmary	27	—	45	51	1,874
Blackburn and East Lancashire Royal Infirmary	67	—	113	107	6,162
Blackpool Municipal Health Centre	24	—	45	57	1,027
Bolton Public Health Department Clinic	67	—	108	209	8,113
Bootle General Hospital	25	1	70	52	2,642
Burnley Victoria Hospital	53	—	76	89	3,123
Bury Joint Clinics.....	70	1	122	142	4,668
Liverpool Mill Road Infirmary	13	—	6	23	666
Liverpool Royal Infirmary	62	—	83	168	2,927
Liverpool Seamen's Dispensary	15	3	58	118	1,034
Manchester Ancoats Hospital	10	—	48	81	1,783
Manchester Royal Infirmary	44	—	67	138	2,290
Manchester St. Luke's Hospital	48	1	195	272	4,312
*Manchester St. Mary's Hospital	6	—	1	17	184
Manchester and Salford Skin Hospital	37	—	3	55	1,751
Oldham Royal Infirmary	65	—	75	99	4,826
Preston Royal Infirmary	67	—	124	185	4,634
Rochdale Municipal Clinic	55	—	77	57	3,751
St. Helens Dispensary	9	—	9	32	329
Salford Municipal Clinic	104	24	189	340	10,969
Southport Infirmary	2	—	24	14	888
Warrington General Hospital	46	—	32	64	1,802
Wigan Royal Albert Edward Infirmary	81	—	92	175	4,858
Other Institutions treating County residents	25	—	22	41	2,259
Total	1,022	30	1,684	2,586	76,872

* Closed 31st December, 1946.

It will be seen from the above table that the number of *new* cases treated during 1946 was 5,322. This represents an increase of 1,809 over the figures for the previous year.

Work carried out under domiciliary scheme.—The table below gives details of the work undertaken during 1946 by the medical practitioners under the domiciliary scheme:—

	Syphilis		Soft chancre		Gonorrhoea		Non-venereal or undiagnosed conditions	
	M.	F.	M.	F.	M.	F.	M.	F.
Cases under treatment on 1st January, 1946	2	4	—	—	—	—	1	4
Cases attending for the first time in 1946	3	3	—	—	2	1	7	3
Cases which ceased to attend before completion of treatment	1	1	—	—	—	—	—	—
Cases transferred to other care	1	1	—	—	—	—	—	—
Cases discharged after completion of treatment and final test of cure or after diagnosis as non-venereal	—	1	—	—	2	1	8	7
Cases remaining on 31st December, 1946, either under treatment or under observation	3	4	—	—	—	—	—	—
Total attendances during 1946	26	36	—	—	8	4	19	8

Arsenobenzene compounds.—Under the arrangements made for the supply of arsenobenzene compounds to medical practitioners “approved” for this purpose, the following were supplied during the year 1946. Comparative figures for the four previous years are also given:—

Year	Total number of medical practitioners “approved” for supply of these preparations	Number of doses of arsenobenzene preparations supplied to medical practitioners										Total
		Kharsulphan	Myosalvarsan	Neokharsivan	Novarsenobillon	Stab.larsan	Sulfarsenol	Sulphostab	Metarsenobillon	Neo Salvarsan	Novostab	
1942	257	109	246	30	114	50	—	6	36	6	—	597
1943	258	4	132	174	74	94	24	10	12	30	—	554
1944	258	19	4	130	136	179	8	—	—	6	—	482
1945	260	—	120	48	64	188	—	—	—	30	24	474
1946	261	22	—	60	70	316	—	15	—	40	—	523

REGULATION 33B.—Ninety-three persons living in the County area were notified once during 1946 under Regulation 33B and 11 persons were notified twice. All persons notified twice, who could be traced, were visited by the almoner with a view to their attendance at the nearest clinic for examination and treatment, if necessary. Patients who did not attend were re-visited.

Persons notified once, who lived in the areas covered by the clinics in Chorley, Fleetwood and Lancaster, were visited by the almoner and requested to attend for examination and treatment, if necessary. Notified persons who lived in other areas were informed by letter that they had been notified and were asked to attend at the nearest clinic for examination. At the same time, the clinic concerned was informed and was asked to report whether the patient had attended and whether an infection had been found. Approximately half these patients did attend. It has not been possible to visit all these patients or to follow up their treatment owing to shortage of staff.

Seventy-two visits were made to patients who were notified once and 48 visits to those notified twice.

Public Health Education.—Since 1st March, 1945, the Public Health and Housing Committee have employed a whole-time organising technician.

During the 12 months ended 31st March, 1947, the educational and propaganda work was continued on lines similar to previous years. The activities in this connection included the distribution of posters relative to venereal diseases and the facilities for treatment; assistance to local authorities in conducting campaigns emphasising the need for immunisation against diphtheria, including the exhibition of films, provision of posters, pamphlets, etc.; film shows to Parent-Teachers Associations on such matters as child welfare, care of the teeth, eyes, posture, etc.; courses on sex education for Youth Movements; lectures and film shows on maternity and child welfare as part of Homecraft Courses; public meetings, film shows and lectures in connection with the recruitment of nurses; propaganda work in connection with the campaign for blood donors embracing display equipment, street banners, film shows in cinemas and organisation of meetings and lunch-hour talks in factories and mills.

In addition, special films were shown to doctors, nurses and midwives on such subjects as eclampsia, gas/air analgesia, and poliomyelitis.

Health education in schools formed a prominent part of the public health educational programme and considerable development in this direction took place during the year. In all, 130 lectures and film shows were given to 22,000 children in 24 of the 37 Divisional Education areas.

Ambulance Facilities.—Under the National Health Service Act, 1946, it will, as from the “appointed day”, become the duty of the County Council as the local health authority, to provide and maintain either directly or through voluntary organisations, ambulances and other means of transport for the conveyance of the sick, mental defectives, or expectant and nursing mothers.

As a preliminary to the formulation of proposals in this connection, an investigation was made during the latter part of 1946, into the present ambulance facilities available in and for the 109 County districts. From the data thus obtained the following statement, summarising the present position, has been prepared.

Ambulance facilities, 1946.

	Type of case			
	Infectious	Non-infectious	Accident	Maternity
No. of districts with own ambulances	6	41	42	41
No. of districts using ambulances of other County districts	9	12	12	10
No. of districts using ambulances of County Boroughs	20	17	17	18
No. of districts using ambulances of districts outside the Geographical County	4	—	—	—
No. of districts using ambulances jointly with other districts	—	15	15	15
No. of districts using ambulances of hospitals and institutions	60	5	5	7
No. of districts using ambulances of more than one type of authority	10	8	9	9
No. of districts using ambulances of St. John Ambulance Association	—	4	3	4
No. of districts using private hire ambulances	—	7	6	5

It will be seen from the above that for the removal of cases of infectious disease reliance is placed upon ambulances provided by the hospitals—Joint Board, County Borough and District Council—with whom the County districts have arrangements for reception of such cases. For non-infectious, accident and maternity cases, the majority of districts either provide ambulances alone or jointly with other districts or utilise the services of neighbouring County Boroughs or County districts. In a few districts the Councils have arrangements for the use of ambulances belonging to the St. John Ambulance Association, or private hire firms, collieries and local works.

In all, there are apparently some 167 ambulances covering the area of the Administrative County, together with 23 other vehicles for sitting cases, etc. These are administered by 95 different authorities, hospitals or other organisations. The number of calls answered during 1946 by these vehicles was: ambulances, 81,834; other vehicles, 3,296—a total of 85,130.

It would appear, from the information supplied by the various authorities and organisations operating the ambulance services, that at least 33 of the ambulances are in immediate need of replacement, whilst many others will require to be replaced in the near future.

Vaccination.—ANNUAL RETURNS.—The Minister of Health, through the Registrar-General, requested that a Return, Form M.379, be supplied relating to vaccination, etc., of children whose births were registered from the 1st January to 31st December, 1945.

To obtain the required details it has been necessary to obtain Returns from the Vaccination Officers in the Administrative County. These have been summarised in the former “Guardians’ Committee” areas, and the totals are given in the table on page 32.

From this table it will be noted that of the 27,325 births included in the return, the number which at the time the return was made had been registered as successfully vaccinated was 8,267 or 30·2 per cent. of the whole, and the number registered as having died unvaccinated was 937 or 3·0 per cent.; of the remaining children 43 or 0·1 per cent. had been registered as insusceptible of vaccination or as having had smallpox, 234 or 0·8 per cent. as having their vaccination postponed by medical certificate, and 12,199 or 44·6 per cent. in respect of whom certificates of conscientious objection were received, leaving 5,645 or 20·6 per cent. as “removed”, “not traced” or otherwise not accounted for.

If the number of deaths, viz., 937 that took place before vaccination be first deducted from the total number of births included in the return it appears that, of the surviving 26,388 children, there were registered at the time of the return 31·3 per cent. as successfully vaccinated; 0·1 per cent. as either insusceptible of vaccination or as having had smallpox; 0·8 per cent. as under medical certificate of postponement, and 46·2 per cent. in respect of whom certificates of conscientious objection to vaccination had been received, leaving 21·3 per cent. unaccounted for as regards vaccination.

VACCINATION RETURN FOR 1945.

Ministry of Health Form M. 379.

RETURN respecting the Vaccination of Children whose Births were registered from 1st January to 31st December, 1945, inclusive.

	Area.	No. of Births in "Birth List Sheets" registered 1st Jan. to 31st Dec., 1945.	No. of these Births entered by 31st January, 1947, in Cols. I, II, IV and V of the "Vaccination Register" (Birth List Sheets), viz.			No. of Births which on 31st Jan., 1947, remained unentered in the "Vaccination Register" on account of :				Number of these Births remaining, 31st Jan., 1947, neither entered in the "Vacc. Reg." nor temporarily accounted for in "Report Book."	No. of Certs. of successful Primary Vacc. of Children under 14 received during 1946. *	(See Footnote) †	No. of Statutory Declarations of Conscientious Objection recd. by V.O. during 1946.			
			Col. I. Successfully Vacc.	Col. II.		Col. IV. No. of Statutory Declarations.	(See footnote). †	Col. V. Died Unvaccinated	No. of Births which on 31st Jan., 1947, remained unentered in the "Vaccination Register" on account of :							
				Insusceptible of Vacc.	Had Small-pox.				Postponement by Medical Certificate.					Removal to Dis., the V.O's of which have been appraised.	Removal to places unknown and Cases not found.	
1			2	3	4	5	6	6a	7	8	9	10	11	12	12a	13
1	Ulverston	457	232	2	—	107	—	12	20	17	32	35	330	44	98	
2	Lancaster	1,546	752	2	—	423	—	47	7	136	33	146	947	92	457	
3	Fylde and Garstang	1,192	382	1	—	413	—	19	2	32	10	333	429	85	397	
4	Preston and Chorley	2,124	554	8	—	894	3	82	31	95	116	344	666	26	919	
5	Blackburn and Clitheroe	781	252	3	—	435	2	14	2	1	29	45	513	146	488	
6	Burnley	1,382	171	3	—	967	—	42	15	68	116	—	220	25	1,155	
7	Haslingden	1,275	64	1	—	815	—	30	6	74	4	281	83	12	837	
8	Ormskirk	1,912	913	—	—	319	1	60	51	242	226	101	3,179	411	324	
9	Wigan	2,018	395	—	—	1,121	7	90	15	174	15	208	407	44	1,187	
10	Bolton	2,037	733	1	—	1,096	7	102	3	65	17	20	1,068	89	1,169	
11	Rochdale and Bury	2,376	472	3	—	1,534	5	63	21	57	84	142	819	315	1,379	
12	Prescot	2,582	1,310	15	—	617	5	159	12	230	75	164	1,953	393	630	
13	Leigh	2,083	572	—	—	1,262	1	68	10	39	36	96	790	183	1,203	
14	Barton-upon-Irwell	2,589	1,156	2	—	837	—	92	32	22	65	383	1,594	333	885	
15	Oldham	633	149	—	—	398	1	13	4	18	21	30	299	194	380	
16	Ashton-under-Lyne	2,338	160	2	—	961	1	44	3	241	22	905	377	86	1,155	
Administrative County Totals		27,325	8,267	43	—	12,199	33	937	234	1,511	901	3,233	13,674	2,478	12,663	

NOTE.—(a) Total of Cols. 3 to 6 and 7 to 11 agree with Col. 2. Children successfully vaccinated after declaration of conscientious objection included in Col. 6. †The number of such cases inserted in Col. 6a.

(b) Figures in Cols. 2 to 11 do not include re-registered births or cases of children born in other districts.

* Total in this column is the number of Certificates of successful primary vaccinations of children under 14 actually received during year including any relating to births registered in previous years. The total thus given includes the Certificates of successful primary vaccinations of which copies have been sent to Vaccination Officers of other districts. ‡ Number of Certificates for 1946 sent to other Vaccination Officers is given in Col. 12a.

The table below shows details of the vaccination of children whose births were registered between 1st January and 31st December of each of the years 1938 to 1945.

Year.	No. of Births in "Birth List Sheets" registered during year	No. of these Births entered by 13 months after end of year in Cols. I, II, IV and V of the "Vaccination Register" (Birth List Sheets), viz.						No. of Births which, 13 months after end of year, remained unentered in the "Vaccination Register" on account of :				Number of these Births remaining 13 months after end of year, neither entered in the "Vacc. Reg." nor temporarily accounted for in "Report Book."	No. of Certs. of successful Primary Vacc. of Children received during year following.	(See Footnote) ‡	No. of Statutory Declarations of Conscientious Objection recd. by V.O. during year following.
		Col. I. Successfully Vacc.	Col. II.		Col. IV. No. of Statutory Declarations	(See footnote). †	Col. V. Died Unvaccinated	Postponement by Medical Certificate.	Removal to V.O.'s of which have been appraised.	Removal to places of which unknown and Cases not found.					
			Insusceptible of Vacc.	Had Small-pox.											
1	2	3	4	5	6	6a	7	8	9	10	11	12	12a	13	
1938	25,173	6,973	49	—	14,840	8	1,052	248	435	696	880	8,658	1,438	14,761	
1939	25,585	7,001	78	—	14,708	9	1,096	284	540	774	1,104	8,165	1,481	14,173	
1940	26,029	7,140	156	—	13,885	12	1,170	231	604	911	1,932	8,711	1,485	12,987	
1941	27,422	8,183	125	—	13,292	23	1,134	239	848	1,132	2,469	11,033	2,014	13,167	
1942	28,396	9,306	87	—	13,341	28	1,152	229	843	1,118	2,320	11,333	2,114	13,476	
1943	29,711	9,561	108	—	13,876	14	1,065	233	1,153	1,056	2,659	12,528	2,584	13,090	
1944	31,847	10,087	61	—	14,325	26	1,094	328	1,514	1,078	3,360	10,194	2,382	12,614	
1945	27,325	8,267	43	—	12,199	33	937	234	1,511	901	3,233	13,674	2,478	12,664	

NOTE.—(a) Total of Cols. 3 to 6 and 7 to 11 agree with Col. 2. Children successfully vaccinated after declaration of conscientious objection included in Col. 6.

†The number of such cases inserted in Col. 6a.

(b) Figures in Cols. 2 to 11 do not include re-registered births or cases of children born in other districts.

* Total in this column is the number of Certificates of successful primary vaccinations of children under 14 actually received during year *including* any relating to births registered in previous years. The total thus given *includes* the Certificates of successful primary vaccinations of which copies have been sent to Vaccination Officers of other districts. ‡ Number of Certificates for year following sent to other Vaccination Officers is given in Col. 12a.

Reference to the Return M.379 will show the number of successful vaccinations, number of certificates of exemptions, etc., during the year 1945, in the various areas of the Administrative County. The statement below shows these figures in percentages to total births after deducting the number of children who died unvaccinated before the date of the Return. For comparison the percentages for the preceding five years are also given:—

Area	Percentages of successful vaccinations						Percentages of statutory declarations					
	1940	1941	1942	1943	1944	1945	1940	1941	1942	1943	1944	1945
1.—Ulverston	55.4	56.6	54.3	55.2	51.6	52.1	33.9	28.0	27.6	24.8	25.6	24.0
2.—Lancaster	50.3	50.7	53.3	53.8	54.2	50.1	35.9	31.6	31.6	29.1	30.3	28.8
3.—Fylde and Garstang	20.6	22.6	31.3	31.2	31.2	32.5	61.9	51.6	52.1	50.0	46.8	35.2
4.—Preston and Chorley	28.6	31.3	33.6	31.6	30.6	27.1	51.4	45.5	44.3	45.5	43.6	43.7
5.—Blackburn and Clithorpe	28.8	37.2	36.5	35.6	35.3	32.8	65.7	55.3	55.9	56.5	54.0	56.7
6.—Burnley	12.4	12.9	13.6	18.4	15.1	12.7	80.1	74.7	71.1	65.6	68.8	72.1
7.—Haslingden	10.6	12.6	12.4	8.1	7.5	5.1	83.5	79.7	76.3	77.7	70.3	65.4
8.—Ormskirk	57.4	53.1	56.7	55.6	55.1	49.2	22.6	20.3	18.4	18.4	16.2	17.2
9.—Wigan	18.8	21.5	19.9	18.1	18.4	20.4	65.1	58.7	58.1	60.2	58.3	58.1
10.—Bolton	28.6	33.2	37.9	34.9	37.2	37.8	68.7	61.3	57.9	61.7	57.3	56.6
11.—Rochdale and Bury	14.1	17.1	21.2	21.0	23.7	20.4	71.2	69.1	67.5	67.4	63.1	66.3
12.—Prescot	49.4	54.3	63.9	63.2	58.9	54.0	30.8	23.8	23.6	23.5	26.2	25.4
13.—Leigh	21.8	26.1	29.7	26.3	28.0	28.3	68.5	64.7	61.0	63.7	62.4	62.6
14.—Barton-upon-Irwell	35.3	38.5	42.9	43.6	43.3	46.2	45.0	41.9	39.2	38.9	38.5	33.5
15.—Oldham	15.9	19.1	23.6	20.1	16.2	24.0	76.9	76.4	66.3	70.0	65.3	64.1
16.—Ashton-under-Lyne	8.4	6.9	9.0	9.7	7.1	6.9	55.8	50.0	49.1	41.4	38.1	41.8
Administrative County	28.7	31.1	34.1	33.3	32.8	31.3	55.8	50.5	48.9	48.4	46.5	46.2

Supply of Insulin.—During the war the Ministry of Health had under review the arrangements by means of which insulin might be supplied either free of cost or at a reduced price to persons suffering from diabetes, and issued Circular No. 2734 on the subject.

It was pointed out that arrangements for the provision of insulin were available under the National Health Insurance Acts, the Poor Law Acts, the Education Act and the Public Health Act. The National Health Insurance Acts, the Poor Law Acts and the Education Act dealt with the majority of cases where the provision of insulin is necessary but there still remained some classes of persons, e.g., dependants of insured persons, widows and spinsters engaged in household duties, for whom no public provision is made apart from the Poor Law.

The Minister therefore considered that these cases would best be met by the use of the powers of section 177 of the Public Health Act, 1936, by which an authority may, with the Minister's approval, provide a temporary supply of medicine for the poorer inhabitants of their district.

The Minister gave the necessary approval to enable all authorities to which the section applies to provide a supply of insulin for persons suffering from diabetes, until the termination of the war.

The Public Health and Housing Committee therefore authorised arrangements to be made for the supply of insulin free of cost to persons eligible under the terms of section 177 of the Public Health Act, 1936.

Only two persons required to be supplied under the terms of this section during 1946.

Cancer.—Under section 1 of the Cancer Act, 1939, the duty was placed upon County and County Borough Councils of making arrangements to secure that the facilities for the treatment of persons suffering from cancer are adequate for the needs of their areas, and to submit their arrangements for the approval of the Minister within one year of the commencement of the Act.

Owing to the difficulties which were encountered during the war years by local authorities in the formulation of comprehensive arrangements for the treatment of cancer, the date by which schemes were to be submitted to the Ministry was postponed from time to time, and at the moment is 31st March, 1948.

The schemes of the Lancashire County Council for the provision of adequate facilities under the Act were approved by the County Public Health Committee in January, 1947, and have since received the approval of the Ministry of Health. Details of the schemes are given below.

For the purpose of the Act, the Administrative County was divided into two areas, co-incidental with the Liverpool and Manchester Hospital Regions set up under the National Health Service Act, 1946.

In the case of County districts within the Liverpool Hospital Region, the County Council, by agreement, have become participants in the scheme of the Liverpool Cancer Control Organization, and have nominated two representatives to serve as members of the Organization. Under this scheme, some 22 voluntary and municipal hospitals have been specially designated as treatment or diagnostic centres and are available for all patients within the area. All forms of treatment for cancer (e.g., surgery, radiotherapy, etc.) will be provided at the Liverpool Radium Institute and the Chester Royal Infirmary, 18 of the hospitals will provide full facilities for treatment by surgery only, and all 22 hospitals will offer facilities for consultation, diagnosis and medical observation after treatment. Full details of the facilities available have been circulated to all medical practitioners in the County Districts affected.

The maintenance costs in respect of such hospital treatment of cases referred from County districts will be borne by the Lancashire County Council, and, in addition, a block grant proportionate to their populations will be payable annually by each participating authority to the Liverpool Cancer Control Organization to cover administrative expenses.

The effective date of participation by the Lancashire County Council in the Liverpool scheme was the 1st July, 1947.

For those County districts situated in the Manchester Hospital Region, the County Council have delegated their responsibilities under the Cancer Act to the Manchester Regional Board. This Board consists of 20 members nominated by the participating authorities, the Lancashire County Council having three representatives. The Board is now responsible for the provision of all facilities for diagnosis and treatment, etc., required under the Act in respect of County cases resident within its area. These responsibilities include the provision of adequate hospital accommodation for treatment by surgery or radiotherapy (the latter being principally undertaken at the Christie Hospital and Holt Radium Institute, Manchester) and the spread of the necessary publicity regarding the scheme amongst the public and medical practitioners.

Under the Manchester scheme no payment will be made by the County Council in respect of individual County cases treated, but the total expenditure of the Manchester Regional Cancer Board will be ascertained annually and levied on the Local Authorities which have delegated their responsibilities to the Board, proportionate to their respective populations.

Participation by the Lancashire County Council in the scheme of the Manchester Regional Cancer Board took effect from the 1st April, 1947.

In the interim period pending the introduction of a free service under the National Health Service Act, 1946, all patients receiving treatment under the above schemes are required to contribute towards the cost of this treatment according to their means.

The National Health Service Act, 1946.—This Act, which received the Royal Assent on the 6th November, 1946, forms, together with the National Health Insurance Act, 1946, and the proposed legislation designed to abolish the present Poor Law system, a major part of the Government's programme of social reform and will affect to a considerable degree the public health administration of the country.

The Act, which charges the Minister of Health to promote the establishment in England and Wales of a comprehensive health service designed to secure improvement in the physical and mental health of the people and the prevention, diagnosis and treatment of illness, is divided into six parts.

The first Part is concerned entirely with central administration and provides for the setting-up of a Central Health Services Council and of Standing Advisory Committees to advise the Minister.

Part II provides for the transfer of all voluntary and municipal hospitals to the Minister of Health, whose duty it then becomes to provide hospital accommodation including the medical and nursing services therefor and also the services of specialists. For administering the hospital, consultant and specialist services, the country is divided into regions, conveniently associated with a university having a medical school, under Regional Hospital Boards, who in turn are charged with the duty of appointing Hospital Management Committees for the day-to-day management of the hospitals. Teaching hospitals, also transferred to the Minister under this Part of the Act, will be outside the general structure under their own Board of Governors, but will be associated with the Regional Boards.

It is Part III of the Act which most directly affects the County Health Services. Under this part of the Act the Councils of Counties and County Boroughs are to be local health authorities within the meaning of the Act and as such are charged with the duty of providing the undermentioned services:—

(a) Health Centres, embracing any or all of the following services—general medical, general dental, pharmaceutical, specialist or out-patient services provided under the hospital provisions of the Act and health education, in addition to the local authority's own health services.

(b) The care of expectant and nursing mothers and of children under 5 years of age.

(c) Midwifery, including the provision of an efficient domiciliary midwifery service and the supervision of midwives.

(d) Health Visiting, which in addition to covering the local authority's present maternity and child welfare duties, will also include the giving of advice as to the care of persons suffering from illness and the measures necessary to prevent the spread of infection.

(e) Home Nursing, thereby making provision, either directly or through voluntary organisations, for the employment of nurses to attend on persons who require nursing in their own homes.

(f) Vaccination and Immunisation, the former being no longer compulsory and both being undertaken by arrangement with medical practitioners; the necessary vaccines and sera to be supplied free of charge by the Minister.

(g) Ambulance Services, either directly or through voluntary organisations, for the conveyance, where necessary, of the sick, mentally defective or expectant and nursing mothers.

In addition, local health authorities may, and if directed by the Minister shall, make arrangements for the prevention of illness, the care of persons suffering from illness or mental defectiveness or the after-care of such persons, and may also arrange, subject to the Minister's approval, for domestic help for households where such help is required owing to the presence of any person who is ill, lying-in, an expectant mother, mental defective, aged, or a child not over 5 years of age. Under this Part of the Act (section 20) local health authorities are required, within such period as may be specified by the Minister, to submit to him for approval their proposals for carrying out the various duties set out above.

Part IV of the Act is concerned with general medical, dental, pharmaceutical and supplementary ophthalmic services and provides for the constitution of Executive Councils and Local Representative Committees as bodies to exercise the functions of providing services under this Part of the Act.

Considerable amendments are made in the Lunacy and Mental Treatment Acts and the Mental Deficiency Acts by Part V of the Act, but such amendments are chiefly concerned with the alteration of those Acts to fit in with the general pattern of the new National Health Service. Mental Hospitals, mental deficiency institutions and psychiatric out-patient clinics are transferred to the Regional Hospital Boards, but the domiciliary service becomes a function of the County Councils and County Borough Councils as local health authorities. The proposals of the local health authorities with regard to their duties under the Lunacy and Mental Treatment and Mental Deficiency Acts are required to be submitted to the Minister for approval similarly to their proposals under Part III of the Act.

The last Part of the Act embraces general provisions with regard to the new service including financial and administrative arrangements, consequential amendments and repeals.

The constitution of the various bodies to be established for the administration of the Act, including the setting-up of a Health Committee by every local health authority, is, *inter alia*, dealt with in the 10 schedules to the Act.

The "appointed day" for the operation of the services provided for in the Act, is the 5th July, 1948.

SANITARY CIRCUMSTANCES OF THE COUNTY

Water Supply.—The populous portions of the Administrative County are well provided with a constant, plentiful, pure and wholesome water supply. The County rural districts also have satisfactory public water supplies available for the bulk of the population, but there are a number of parishes, or parts of parishes—and also isolated units in some urban districts—where the supply is inadequate and unsatisfactory.

The following tabular statement shows the source of the water supply to each County district together with the supplying authority. The sources of public supplies shown in the statement are in each case upland gathering grounds unless otherwise indicated:—

LOCAL WATER SUPPLIES.

Urban Districts	Authority from which supply is obtained.	Source of supply.
Abram	Liverpool C.B.	Rivington reservoir.
Accrington (B)	Accrington District Gas and Water Board	Moorland and deep wells.
Adlington	Manchester C.B.; Blackrod U.D.	Thirlmere; upland surface water and springs.
Ashton-in-Makerfield	Own supply; Liverpool C.B.	Leyland Green; Rivington reservoir.
Ashton-under-Lyne (B)	Ashton-under-Lyne, etc., Waterworks Joint Committee	Swineshaw, Chew and Greenfield valleys.
Aspull	Bolton C.B.; Wigan R.D.	Upland surface water; deep wells.
Atherton	Manchester C.B.; Bolton C.B.	Thirlmere; upland surface water.
Audenshaw	Ashton-under-Lyne, etc., Waterworks Joint Committee	Swineshaw, Chew and Greenfield valleys.
Bacup (B)	Own supply	Cowpe.
Barrowford	Nelson (B)	Moorland—Ogden and Coldwell.
Billinge and Winstanley	Own supply; Wigan C.B.	Deep wells, disused colliery shafts and quarry workings.
Blackrod	Own supply	Upland surface water and springs.
Brierfield	Nelson (B)	Moorland—Ogden and Coldwell.
Carnforth	Carnforth Water Company	Moorland—reservoir at Withets.
Chadderton	Oldham C.B.; Manchester C.B.; Heywood and Middleton Water Board	Upland surface water; Thirlmere; Ashworth Moor, Knoll Moor and Rooley Moor.
Chorley (B)	Liverpool C.B.; Manchester C.B.	Rivington reservoir; Thirlmere.
Church	Accrington District Gas and Water Board; Oswaldtwistle U.D.	Moorland and deep wells.
Clayton-le-Moors	Accrington District Gas and Water Board	Moorland and deep wells.
Clitheroe (B)	Own supply	Grindleton Fell.
Colne (B)	Own supply	Moorland and springs—Laneshaw and Bents.
Crompton	Oldham C.B.	Various upland sources.
Crosby (B)	Liverpool C.B.	Rivington reservoir and Lake Vyrnwy.
Dalton-in-Furness	Barrow-in-Furness C.B.	Upland gathering grounds on adjacent moorlands.
Darwen (B)	Own supply; Bolton C.B.	Upland surface water.
Denton	Manchester C.B.	Thirlmere.
Droylsden	Manchester C.B.	Thirlmere.
Eccles (B)	Manchester C.B.	Thirlmere.
Failsworth	Oldham C.B.; Manchester C.B.	Various upland sources; Thirlmere.
Farnworth (B)	Bolton C.B.	Upland surface water.
Fleetwood (B)	Fylde Water Board	Moorland water—Grizedale and Stocks.
Formby	Southport and District Water Board	Deep wells—reservoirs at Aughton.
Fulwood	Own supply; Fylde Water Board	Beacon Fell and Saddle Fell; Grizedale and Stocks valleys.

LOCAL WATER SUPPLIES (*continued*)

Urban Districts.	Authority from which supply is obtained.	Source of supply.
Golborne	(a) Ince-in-Makerfield U.D.; (b) Newton-le-Willows U.D.; (c) Liverpool C.B.; (d) Warrington C.B.	(a) Deep wells; (b) Five deep wells; (c) Rivington reservoir; (d) Deep wells.
Grange	Own supply	Newton-in-Cartmel.
Great Harwood	Accrington District Gas and Water Board	Moorland and deep wells.
Haslingden (B)	Irwell Valley Water Board; Accrington District Gas and Water Board	Various upland sources and deep wells.
Haydock	Liverpool C.B.	Rivington reservoir.
Heywood (B)	Heywood and Middleton Water Board	Ashworth Moor, Knoll Moor and Rooley Moor.
Hindley	Liverpool C.B.	Rivington reservoir.
Horwich	Own supply	Moorland, disused mine shaft and springs.
Huyton-with-Roby	Liverpool C.B.	Lake Vyrnwy.
Ince-in-Makerfield	Own supply; Liverpool C.B.	Deep artesian wells; Rivington reservoir.
Irlam	Manchester C.B.	Thirlmere.
Kearsley	Bolton C.B.; Irwell Valley Water Board	Various upland sources and deep well.
Kirkham	Fylde Water Board	Moorland—Grizedale and Stocks.
Lancaster (B)	Own supply	Moorland surface water—Upper Wyresdale.
Lees	Oldham C.B.	Upland surface water.
Leigh (B)	Liverpool C.B.	Rivington reservoir.
Leyland	Own supply; Manchester C.B.	Boreholes at Whittle-le-Woods; Thirlmere.
Litherland	Liverpool C.B.	Lake Vyrnwy.
Littleborough	Rochdale C.B.	Moorland reservoirs.
Little Lever	Irwell Valley Water Board	Various upland sources and deep well.
Longridge	Preston C.B.	Upland surface water.
Lytham St. Annes (B)	Fylde Water Board	Moorland water—Grizedale and Stocks.
Middleton (B)	Heywood and Middleton Water Board	Ashworth Moor, Knoll Moor and Rooley Moor.
Milnrow	Rochdale C.B.; Oldham C.B.	Various upland sources.
Morecambe & Heysham (B)	Lancaster (B)	Moorland surface water—Upper Wyresdale.
Mossley (B)	Ashton-under-Lyne, etc., Waterworks Joint Committee	Moorland reservoirs at Swineshaw and Yeoman Hey.
Nelson (B)	Own supply	Moorland—Ogden and Coldwell.
Newton-le-Willows	Own supply	Five deep wells.
Ormskirk	Own supply; Southport and District Water Board	Deep wells.
Orrell	Own supply; Wigan C.B.	Deep wells.
Oswaldtwistle	Own supply	Upland surface water.
Padiham	Own supply	Pendle Hill.
Poulton-le-Fylde	Fylde Water Board	Moorland water—Grizedale and Stocks.
Preesall	Fylde Water Board	Moorland water—Grizedale and Stocks.
Prescot	Liverpool C.B.	Lake Vyrnwy and Rivington reservoir.
Prestwich (B)	(a) Manchester C.B.; (b) Heywood and Middleton Water Board; (c) Irwell Valley Water Board	(a) Thirlmere; (b) Ashworth Moor, Rooley Moor Knoll Moor; (c) Various upland sources and deep well.
Radeliffe (B)	Irwell Valley Water Board	Various upland sources and deep well.
Rainford	St. Helens C.B.	Deep wells.
Ramsbottom	Irwell Valley Water Board	Various upland sources and deep well.
Rawtenstall (B)	Irwell Valley Water Board; Bacup (B)	Various upland sources and deep well.
Rishton	Accrington District Gas and Water Board	Moorland and deep wells.
Royton	Oldham C.B.	Various upland sources.

LOCAL WATER SUPPLIES (*continued*)

Urban Districts.	Authority from which supply is obtained.	Source of supply.
Skelmersdale	Southport and District Water Board	Deep wells—reservoirs at Aughton.
Standish-with-Langtree	Liverpool C.B.; Manchester C.B.	Rivington reservoir; Thirlmere.
Stretford (B)	Manchester C.B.	Thirlmere, Haweswater and Longdendale.
Swinton & Pendlebury (B)	Bolton C.B.; Manchester C.B.	Upland surface water; Thirlmere.
Thornton Cleveleys	Fylde Water Board	Moorland water—Stocks and Grizedale.
Tottington	Irwell Valley Water Board	Various upland sources and deep well.
Trawden	Own supply	Springs—Boulsworth Hill.
Turton	Bolton C.B.; Irwell Valley Water Board	Upland surface water.
Tyldosley	Manchester C.B.	Thirlmere.
Ulverston	Barrow-in-Furness C.B.	Upland surface water—Pennington reservoir.
Upholland	Own supply	Two deep wells at Tontino and Roby Mill.
Urmston	Manchester C.B.	Thirlmere.
Walton-le-Dale	Manchester C.B.	Thirlmere.
Wardle	Rochdale C.B.	Moorland sources.
Wosthoughton	Bolton C.B.	Upland surface water.
Whitefield	Irwell Valley Water Board	Various upland sources and deep well.
Whitworth	Rochdale C.B.; Bacup (B)	Various upland sources.
Widnes (B)	Own supply	Three deep wells in sandstone.
Withnell	Liverpool C.B.	Rivington reservoir.
Worsley	Bolton C.B.; Manchester C.B.	Upland surface water; Thirlmere.
RURAL DISTRICTS.		
Blackburn	(a) Blackburn C.B.; (b) Manchester C.B.; (c) Darwen (B)	(a) Brennand; (b) Thirlmere; (c) Upland surface water.
Burnley	Own supply; Burnley C.B.; Nelson (B); Accrington (B); Padiham U.D.	Chiefly upland surface water and springs.
Chorley	Manchester C.B.	Thirlmere.
Clitheroe	Own supply; Blackburn C.B.; Clitheroe (B)	Moorland and springs.
Fylde	Fylde Water Board	Moorland water—Grizedale and Stocks.
Garstang	Fylde Water Board; Manchester C.B.	Moorland water—Grizedale and Stocks; Thirlmere.
Lancaster	(a) Manchester C.B.; (b) Lancaster (B); (c) Fylde Water Board; (d) Carnforth and District Water Company	(a) Thirlmere; (b) Wyresdale Fells; (c) Grizedale and Stocks; (d) Withens.
Linehurst	Ashton-under-Lyne, etc., Waterworks Joint Committee; Oldham C.B.	Chew valley; various upland sources.
Lunodale	Own supply and Manchester C.B.	Caton and Thirlmere.
Preston	(a) Preston C.B.; (b) Manchester C.B.; (c) Fylde Water Board; (d) Fulwood U.D.	(a) Langden Valley; (b) Thirlmere; (c) Grizedale and Stocks; (d) Beacon Fell and Saddle Fell.
Ulverston	Barrow-in-Furness C.B.; Grange U.D.	Upland surface water—Seathwaite and Pennington; Newton-in-Cartmel.
Warrington	Liverpool C.B.; Warrington C.B.; St. Helens C.B.	Rivington reservoir; deep wells and upland surface water; Lake Vyrnwy.
West Lancashire	Liverpool C.B.; Southport and District Water Board; St. Helens C.B.; Preston C.B.; Ormskirk U.D.; Upholland U.D.; Wigan R.D.	Rivington reservoir; deep wells and upland surface water.
Whiston	Liverpool C.B.; St. Helens C.B.; Widnes (B); Warrington C.B.	Rivington reservoir; deep wells and upland surface water.
Wigan	(a) Own supply; (b) Liverpool C.B.; (c) Blackrod U.D.	(a) Deep wells; (b) Rivington reservoir; (c) Upland surface water and springs.

PUBLIC MAINS SUPPLIES.—The following table, compiled from the local health reports, shows the approximate number of houses and population receiving water from the public mains (a) direct and (b) by means of stand-pipes.

Water supplied from public mains.

	Direct to houses		By means of stand-pipes	
	No. of dwelling houses	No. of population	No. of dwelling houses	No. of population
Total Urban Districts	501,480	1,622,766	218	872
Total Rural Districts	71,356	244,784	97	323
Administrative County	572,836	1,867,550	315	1,195

The district reports indicate that the public supplies are satisfactory, both in quality and quantity, except in one or two instances. Examinations of piped supplies are carried out in many districts in the County area, both of the raw water and of the water going into supply after treatment, the frequency of sampling ranging from occasional specimens to regular weekly or monthly examinations. In the case of districts receiving supplies from outside sources, sampling is usually undertaken by the supplying authority.

Where contamination of supplies has been in evidence, the local health authorities appear to have taken appropriate action and in one district, as an additional precaution, all new workmen are examined for *B. typhosus* prior to commencing work. Many areas report the installation of chlorination plant or of the continuance of chlorination of all supplies. The raw water in several districts is soft and slightly acid, and preventive measures against plumbo-solvent action include treatment of the water before going into supply and the use of tin-lined service pipes.

Extensions and improvements to water supplies have been carried out during 1946 in several districts to areas or groups of dwellings previously dependent on private supplies, and also to keep pace with housing development.

PRIVATE SUPPLIES.—It would appear from the local reports that some 12,868 dwellings housing a population of approximately 41,324 are still dependent upon supplies from wells, springs, etc. Of these, 6,164 houses, with a population of 21,988, are to be found in the rural districts of the County. A shortage has in certain instances been experienced during prolonged dry periods where the supply is obtained from private sources. Frequent chemical and bacteriological examinations have been made in many areas and in two or three districts, following unsatisfactory results, the houses concerned were connected to the public supply.

The Rural Water Supplies and Sewerage Act, 1944.—This Act extended the duties of local authorities by placing on them an obligation to provide a supply of wholesome water *in pipes* to every *rural locality* in their district in which there are houses or schools, and an extension of mains to points which would enable the houses or schools to be connected thereto at a reasonable cost.

Under the Act, the Minister of Health is enabled to make grants to local authorities towards the cost of providing a supply, or improving an existing supply of water and of sewerage and sewage disposal works in a rural locality, but grants in respect of the latter are only made where the Minister is satisfied that the need for the works is due to anything done or proposed to be done to provide or increase piped water supplies in the localities concerned. Where under the Act the Minister undertakes to make a contribution, the County Council concerned is also required to contribute.

The Act provides that in order to afford County Councils full opportunity of expressing their views on the scope of schemes and the desirability or otherwise of individual schemes being confined to separate parishes or districts or embracing all the areas in question, local authorities shall consult with the County Council before submitting schemes to the Minister.

From the passing of the Act until October, 1946, 21 schemes under the Rural Water Supplies and Sewerage Act, 1944, involving an estimated capital expenditure of approximately £350,000 had been submitted to the County Council by local authorities. Of these, 16 were in respect of the provision, or extension, of water supplies and the remainder for works of sewerage and sewage disposal.

With the exception of three schemes, one of which was not approved, one which was considered to be more appropriately dealt with under section 307 of the Public Health Act, 1936, and one which was still under investigation, all the schemes were approved by the County Council for submission by the local authorities to the Minister of Health.

Since October, 1946, to the present time (October, 1947), a further 26 schemes involving an estimated capital expenditure of approximately £460,500 (including the one previously referred to as under investigation) have been approved by the County Council for submission to the Minister of Health for grant purposes. Thirteen of these schemes related to the provision, or extension, of water supplies and the remainder to works of sewerage and sewage disposal.

In only four instances out of a total of 44 schemes approved by the County Council has the Minister so far indicated the Government contributions towards the cost of the schemes.

Drainage and Sewerage.—According to the district reports, progress during the year has largely been confined to improvements and reconditioning of existing plants and renewals of defective drains and sewers. In some instances, extensions of the sewerage system have been completed to post-war housing sites, and many districts indicate that sewerage schemes are being drawn up or awaiting approval.

The majority of areas or townships in the Administrative County which are without a proper drainage or sewerage system are naturally to be found in the rural districts and are usually so isolated or remote as to make the provision of sewers very difficult and costly.

Rivers and Streams.—The prevention of pollution of rivers and streams in the Administrative County, which previously was largely under the jurisdiction of the Mersey and Irwell and the Ribble Watershed Joint Committees, is now covered by the provisions of the Lancashire County Council (Rivers Board and General Powers) Act, 1938. The Act provided for the constitution and incorporation of a joint board, known as the Lancashire Rivers Board, consisting of representatives of the County Councils of the Counties of Lancaster, Chester and Derby and the Councils of several County Boroughs, upon which were conferred powers with regard to the prevention of the pollution and obstruction of the rivers, streams and watercourses under its jurisdiction.

The Board was constituted as from 1st April, 1939, and its jurisdiction extends over the whole of the geographical County of Lancaster excepting the areas comprised within the City of Liverpool and the County Boroughs of Barrow-in-Furness and Bootle.

The public health aspect of the question of the prevention of pollution of rivers and streams is of special importance because of their potentialities as sources of water supply, or on account of their possibilities as sources of pollution of water supplies.

The local reports contain references to the action taken during the year to prevent or minimise the pollution of rivers, streams, ditches, etc. Polluting effluents frequently discharge into streams in industrial districts, and in rural areas ditches often receive the overflow from cesspools and septic tanks and the direct discharges from house drains.

Closet Accommodation.—The statement below, compiled from the local health reports, gives some indication of the numbers of the various types of closet accommodation in the Administrative County area at the end of 1946. The number of houses on the water carriage system is approximately 539,700.

Closet Accommodation at end of 1946.

	Urban districts	Rural districts	Administrative County
Privy middens.....	4,326	9,489	13,815
Privy closets	6,263	11,925	18,188
Pail closets	12,284	10,102	22,386
Fresh-water closets	451,466	52,328	503,794
Waste-water closets	71,615	3,349	74,964
Dry ashpits (excluding middens)	12,161	1,569	13,730
Movable ashbins	501,750	60,461	562,211

The figures below indicate the action taken in the County districts during 1946 to provide the more sanitary types of closet accommodation:—

Conversions	Urban districts	Rural districts	Administrative County
Privy closets to fresh-water closets.....	101	164	265
Privy closets to pail closets	19	51	70
Pail closets to fresh-water closets	208	103	311
Waste-water closets to fresh-water closets	622	7	629

During the war programmes of conversion of privy and pail closets to the water carriage system were held up. Previously, determined efforts had been made by local authorities in this respect and the demolition of property in slum clearance areas was having a beneficial effect. As things become more normal, however, it is to be anticipated that much progress in this direction will be made. Generally speaking, privy and pail closets only exist where no sewers are available.

Sanitary Inspection.—The following table gives the number of premises visited during 1946 by local sanitary officials, the defects or nuisances discovered and the results of action taken. Legal proceedings were instituted in 24 instances, an abatement order being secured in each case except one where the defendant undertook the necessary work before the case was heard.

Sanitary Inspections during 1946.

	No. of premises visited	Defects or nuisances		No. of notices served	
		No. discovered	No. abated	Informal	Statutory
Urban districts	197,280	81,899	62,469	33,507	5,088
Rural districts	26,141	4,929	4,429	2,801	215
Administrative County	223,421	86,828	66,898	36,308	5,303

Smoke Abatement.—Although, due to the intervention of the war, the activities of local authorities in regard to the control of nuisance from excessive smoke pollution have been curtailed, the local reports for 1946 show that, in all, 1,343 observations were taken. There are reported to be some 2,386 factory and works chimneys in the County area and in those districts where a time limit for the emission of black smoke is in force, such limit varies from 2—5 minutes in the half-hour to 2—12 minutes in the hour.

In most districts the health officials actively co-operate with the managements of the firms in their districts with a view to the abatement of the excessive emission of black smoke and in some instances firms have arranged for their firemen to attend classes on boiler house practice. Other measures taken in various districts include advice to stokers and boilermen, personal interviews with works managers and the installation of various types of up-to-date plant by firms to counteract atmospheric pollution.

Several Medical Officers of Health, however, make note of the difficulties experienced in regard to smoke abatement due to the use of inferior or unsuitable fuel.

Disinfestation.—From information supplied by local Medical Officers of Health it would appear that in 88 districts during 1946 approximately 350 Council houses and 1,244 other houses were found to be infested. Disinfestation was undertaken in respect of 320 Council houses and 1,255 other houses.

The methods of disinfestation vary considerably. Fumigation by means of hydrogen cyanide gas is used to some extent, particularly in cases of bad infestation. Other methods include spraying with various liquid insecticides and special germicide preparations. On the whole, these are reported to be efficient. Several Medical Officers of Health specifically mention the use of D.D.T., both in liquid and powder form, by means of which good results have been obtained.

To ensure that the belongings of tenants are free from vermin before removal to Council houses, the local health officials in most instances make thorough examinations of the houses and belongings of tenants, and in cases where infestation is in evidence, the houses, furniture, bedding, clothing, etc., are suitably disinfested.

Disinfestation entailing the use of hydrogen cyanide gas is invariably carried out by contractors employed by the local authorities, but fumigations with sulphur, spraying with insecticides, and treatment of clothing and bedding by steam are usually undertaken by the local authorities' staffs.

The local reports indicate that, in order to prevent infestation or re-infestation after cleansing, the local health officers of many districts make periodic inspections and give personal advice to the tenants.

Premises and Occupations which can be controlled by Bye-laws or Regulations.—**OFFENSIVE TRADES.**—Offensive trades have been established in 56 districts, the premises numbering 227. These are chiefly tripe boilers, gut scrapers, tanners or leather dressers, fat melters and oil works, soap boilers, etc.

RAG FLOCK ACTS, 1911 AND 1928.—According to the local reports, there are in the Administrative County area 21 premises on which rag flock is manufactured, used or sold, the districts concerned being Chorley (B), Crosby (B), Lancaster (B), Leigh (B), Stretford (B) and Whitefield. A total of 28 inspections of the premises were made during 1946 by the local health officials in these districts and 12 samples were taken. At Lancaster (B) legal proceedings were instituted in three cases where the samples obtained proved unsatisfactory.

FACTORIES ACT, 1937.—The condition of workshops and workplaces in the County districts is reported to be, on the whole, generally satisfactory. In most cases regular inspections are apparently carried out and various improvements have been made in some districts particularly in regard to sanitary accommodation.

COMMON LODGING HOUSES.—The local reports show that there are 31 common lodging houses in 21 districts in the Administrative County. The condition of the majority of these is described as "fairly good".

HOUSES LET IN LODGINGS.—Reference to this class of accommodation is made in 14 districts, there being 100 such dwellings on the local registers. Most of these are reported to be maintained in a fairly good condition.

TENTS, VANS AND SHEDS.—Where these exist, regular supervision apparently takes place and in a number of districts steps were taken during the year to remove caravans, etc. Several authorities have arrangements for the licensing of such structures for definite periods.

UNDERGROUND SLEEPING ROOMS.—No action is recorded in the local reports in regard to this type of accommodation.

CANAL BOATS.—Inspections of canal boats—66 in number—are reported in seven districts; two infringements were noted.

HOUSING

During 1946, housing continued to be one of the chief matters claiming the attention of local authorities. The task of alleviating the acute shortage of houses occasioned by the absence of normal building activity during the war years and damage caused by enemy action became, in accordance with Government policy, one for local authorities.

Whilst the year 1946 saw the implementation of schemes formulated during the latter part of 1945 following the cessation of hostilities, progress was somewhat restricted by the lack of materials, etc. Nevertheless, as the table on page 90 shows, 4,805 new houses were erected during the year. In addition, according to information supplied by local Medical Officers of Health, some 11,500 dwellings of varying types were under construction at the end of the year.

Many of the houses erected during the year were of the temporary prefabricated type although the longer term plans of local authorities provide for substantial numbers of traditional permanent houses. Of the 4,805 new houses, 2,430 were erected by or on behalf of local authorities, and 2,375 by other bodies or persons. Amongst the latter was a number of temporary houses erected by the Ministry of Works in certain districts.

According to information supplied by the District Councils, many further schemes for the erection of houses are either in hand or contemplated.

Generally speaking, it would appear that there are few special difficulties in the Administrative County in the way of providing suitable sites for new houses except in a few of the more congested districts. In certain areas, however, the choice of suitable building sites is greatly limited by mining subsidence.

In the absence of an up-to-date survey, records of overcrowding—although such is amply apparent—are very incomplete in many districts and consequently no accurate estimate of overcrowding conditions in the Administrative County is possible. A certain amount of overcrowding has, of course, already been relieved by the resumption of building since the war, but there is still a very considerable amount of work to be done in this connection.

Of the housing conditions generally, these, according to the local reports, except as regards clearance areas, can be considered on the whole as of a fairly good standard. To some extent, however, houses are falling into disrepair owing to difficulties of obtaining labour and materials and, in certain districts, there are large numbers of houses which, were it not for the acute shortage, would be demolished as unfit for human habitation. The prevailing defects in most districts are chiefly dampness and lack of repair work, whilst in areas embraced by the Lancashire coalfield mining subsidence is responsible for much structural damage.

Back-to-back houses number some 9,000, but here again, with the acute housing shortage, programmes of conversion or clearance which were being speedily dealt with prior to the war, are at the moment out of the question. The bulk of the Administrative County is relatively free from this type of house, more than half the total number being situated in four or five County districts.

A summary of the local reports reveals that some 5,300 houses are without adequate internal water supply, whilst approximately 14,000 houses have no separate water-closet or other adequate sanitary accommodation. The majority of these are to be found in the rural areas.

Table 5, pages 90 to 92, compiled from information supplied by local Medical Officers of Health, gives some indication of housing activities in the various urban and rural districts of the County during 1946, together with the steps taken to remedy such property as was found to be not in all respects reasonably fit for human habitation. In all, 48,016 houses were inspected under the Public Health or Housing Acts for housing defects, 92,815 inspections being made for the purpose. A total of 690 houses were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation, whilst in addition, 25,313 houses were found not to be in all respects reasonably fit. Of the latter, 19,075 were rendered fit during the year in consequence of informal action by the local authorities or their officers. Action under the Public Health and Housing Acts with respect to defective dwellings continues to be difficult, however, chiefly on account of the shortage of labour and materials and the fact that owing to the high cost of repair work and the control of rents at a low level, property owners in many instances are reluctant to do more than a minimum of repair work.

INSPECTION AND SUPERVISION OF FOOD

Milk Supply.—Many references are made in the local reports to the action taken during the year in regard to the milk supply. During recent years and in spite of war-time difficulties much time and attention, both of the County and local public health officials, has been devoted to the problems involved in the production of a pure and safe milk supply. The problem in this County, in which there are 7,947 cowkeepers and 3,234 dairymen or purveyors of milk, is one of considerable magnitude. The number of dairy farms is 7,156 and the approximate number of cows 135,545.

Inspections of farm premises by the local officials in 1946 numbered 11,851 and a large number of routine inspections were made by the County Sanitary Officers in co-operation with the local officials.

On these visits by sanitary officers opportunity is taken to impress upon milk producers the necessity, from the point of view of the public health, of a high standard of bacteriological purity in milk, and that to ensure this, a good sanitary environment is essential, coupled with regular and careful grooming and cleaning of the cattle, and a rigid standard of cleanliness in all stages of production and distribution. To achieve an adequate, clean and safe supply of milk is a matter which involves the highest interests of the public health.

The local reports show that in a number of districts works of improvement, including reconstruction of cowsheds, erection of modern dairies, floors concreted, additional window area provided and drainage improved, were undertaken during the year.

TUBERCULOUS MILK.—During the year 1946, the total number of notifications received that tubercle bacilli had been found in milk including school milk was 169. Of these, 124 were notified by County Boroughs and County Districts and 45 were found as a result of the routine sampling carried out by the County Council.

In accordance with the provisions of Part IV of the Agriculture Act, 1937, these notifications were transmitted to the Divisional Inspector of the Ministry of Agriculture and Fisheries who arranged for veterinary inspections to be carried out at the farms concerned to eliminate any affected cattle.

The number of veterinary inspections completed during 1946 was 122. The following table analyses the results of the investigations carried out by the Ministry of Agriculture and Fisheries:—

Cases where animals seized under the Tuberculosis Order, 1938	.....	90
No. of animals seized	.....	106
Cases reported negative where animals had been sold prior to the investigation	.....	15
Cases reported negative, no animals seized	.....	17

THE MILK (SPECIAL DESIGNATIONS) REGULATIONS, 1936-46.—The number of licences issued by the County Council under these regulations and in operation at the 31st December, 1946, was—Tuberculin Tested, 184; Accredited, 815. The statement below gives particulars of other licences issued during the year by local sanitary authorities:—

Dealers' Licences.

	Tuberculin tested	Accredited
Bottling	16	27
Distribution	112	47

Pasteurised Milk Licences.

Pasteurising plants	21
Retail distribution	254

Routine sampling of "tuberculin tested" and "accredited" milk supplies is carried out by the County Sanitary Officers and each sample is submitted to the methylene blue test and examined for B.coli. The following table shows for the past five years the numbers of samples taken and the percentages of unsatisfactory samples:—

Type of milk	No. of samples taken				
	1942	1943	1944	1945	1946
Tuberculin tested	70	63	81	74	82
Accredited	892	819	758	417	706
Total	962	882	839	491	788
Percentage unsatisfactory	30.7	28.0	20.0	22.6	23.1

When a sample is reported as unsatisfactory further samples are obtained and the producer advised, where necessary, of improvements likely to raise the standard of the milk supply. Subsequent unsatisfactory samples result in the producer being cautioned and warned of the possible suspension of his licence, a procedure which has usually effected a marked response in the carefulness, and cleanliness in the methods, of the offender.

It was not found necessary during the year to suspend or cancel a graded milk licence.

Examination for tubercle bacilli.—During the year, 607 samples of graded milk were examined for tubercle bacilli, of which 34 or 5·6 per cent. were found positive. Appropriate action was taken immediately on notification of affected samples.

PROVISION OF MILK TO SCHOOL CHILDREN.—During the year 1946 the number of samples of milk obtained from school supplies and examined for the presence of tubercle bacilli was 548, and of these, six samples or 1·1 per cent. were reported as positive. The Minister of Agriculture and Fisheries was informed and he arranged for veterinary inspections of the herds concerned. Attention is drawn to the fact that the samples of milk found to contain tubercle bacilli were all produced at ungraded farms.

In implementation of Government policy, the Area Milk Officer has carried out a census of all schools with the object of determining the type of milk consumed and efforts are now being made in consultation with the County Council to provide heat-treated or T.T. milk at schools where neither of these types of milk are at present supplied. As a result, during 1946 several schools previously supplied with ungraded milk have been provided with heat-treated or T.T. milk.

DEFENCE REGULATION 55G.—The Defence Regulation 55G restricts the sale of raw milk in certain areas in accordance with the policy of the Government outlined in the White Paper—"Measures to Improve the Quality of the Nation's Milk Supply".

It lays down that milk may not be sold by retail or supplied free of cost in a specified area, unless it is Tuberculin Tested, Accredited, Heat-treated, Pasteurised or Sterilised.

Paragraph 13 of the regulation states that "milk sold by retail as Pasteurised will be required to comply with the Phosphatase and Methylene Blue tests in addition to the conditions laid down in the Milk (Special Designations) Regulations, 1936 to 1946. Where the Food and Drugs Authority are not the licensing authority for milk sold as Pasteurised, they should co-operate with the latter authority in order to avoid duplication of sampling, and should keep that authority informed where any samples fail to pass the tests prescribed for the purpose of the Regulation".

The Minister of Food has requested that in all cases in which the appropriate enforcing authority or their Medical Officer of Health have been, or are in future, notified that authorisation has been granted to operate a heat-treatment plant, the authority would arrange for the regular sampling of milk processed at the plant whether sold wholesale or retail.

The County Council, who are the Food and Drugs authority, are the enforcing authority for the purpose of the Defence Regulation 55G, but are not the licensing authority for pasteurised or heat-treated milk.

The Minister of Food has issued "authorisations" to 19 firms in 17 County Districts and in accordance with paragraph 13 of the Regulation arrangements were made with the local authorities of the 17 districts for the regular sampling of heat-treated milk.

During the year 1946, the number of samples obtained and submitted to the prescribed tests was 94 of which 16 failed to pass the tests.

Particulars of the unsatisfactory samples were reported to the Area Milk Officer who communicated with the firms concerned.

In accordance with the requirements of the Regulation a return has been forwarded each month to the Minister of Food giving the results of the samples submitted to the prescribed tests.

Food Poisoning.—OUTBREAK DUE TO THE STAPHYLOCOCCUS PYOGENES AUREUS.—On three occasions during August and September, 1946, there occurred amongst miners employed in a number of collieries in south-east Lancashire an illness which was characterised by abrupt onset with dizziness, stomach pains, nausea, vomiting and diarrhoea. Each outbreak was explosive in type, the victims of each becoming ill about three hours after taking food. The illness was of short duration, recovery being the rule within three days.

On the 16th August, 16 men were affected, on the 30th August there were 22, but on the 27th September the number rose to 167.

Two Cooking Centres, one at the Sandhole in Worsley and the other in the County Borough of Wigan, prepared food for the miners in the affected area. Each centre catered for its own group of collieries, the Wigan Centre supplying 14 and the Sandhole 13 collieries.

Sandwich meals, made from some of the following articles of food, were supplied—bread or barm-cakes with margarine, and roast beef, pressed pickled beef, corned beef, ham, cheese, or jam as filling. A popular sandwich pack, supplied by both centres, was known as the "B" pack. It contained two large sandwiches, one filled with roast or corned beef, and the other with pressed pickled beef.

On the occasion of the *first outbreak*, which was confined to collieries supplied by the Sandhole Centre, the Medical Officer of Health of the Worsley Urban District Council, suspecting that the outbreak was due to contamination of the food by organisms, sent specimens of all the food in use for bacteriological examination. Pending the result of the examination, the issue of the "B" pack, which had been recognised as a common factor in the outbreak, was prohibited. The bacteriological report stated—"Organisms of the Salmonella and Dysentery groups *not* isolated", and the "B" packs were again issued.

The *second outbreak* occurred in the area of the Tyldesley Urban District Council amongst miners supplied by the Wigan Cooking Centre. Again the "B" pack was a common factor. This was puzzling until it was ascertained by the local Sanitary Authority that the pressed beef used in the sandwiches had been borrowed from the Sandhole Centre, where it had been prepared, pickled, and pressed prior to being transferred to Wigan for use in sandwiches.

The sale of the "B" pack was suspended, and the Sandhole Centre was forbidden to use the pressed beef kept in stock.

Chemical and bacteriological examinations were made, not only of the "B" pack but of all the articles of food in use, together with the brine used for pickling. Chemically, nothing unusual was found, apart from the fact that the pickling brine contained only 5 per cent. of salt. A percentage of 15—25 is usual for this purpose. Bacteriologically, pathogenic organisms were not isolated either from a specimen of the meat used in making the sandwiches, or from a sample of the "B" packs which were sent for consumption two days later, but a report on the examination of a "B" pack taken from the batch issued to the affected miners stated—"Staphylococcus Pyogenes Aureus isolated. Organisms of the Salmonella or Dysentery groups *not* isolated."

Specimens of vomit from two patients admitted to hospital were reported on in the following terms—"Organisms of the Salmonella and Dysentery groups *not* isolated. Staphylococcus Pyogenes Aureus *not* isolated." A close investigation of the circumstances of the outbreak took place, and recommendations designed to prevent contamination of the food during its preparation were made.

On the 27th September, the *third outbreak* occurred involving 167 men, all of whom had eaten food prepared by the Sandhole Cooking Centre. The County Medical Officer of Health was notified as a matter of urgency during the evening of the same day, and a conference took place the following day. At the conference, which was attended by representatives of all interested parties—the Ministries of Health, Food, Fuel and Power, the Coal Board, the National Miners' Union, the Miners' Welfare Committee, the colliery proprietors, the catering firm, and the Health Departments of the two local Sanitary Authorities mainly concerned, and the Lancashire County Council—the circumstances of the two previous outbreaks were reviewed, and the facts of the new outbreak examined.

The conclusions of the conference were:—

(1) That the consumption of pressed beef prepared at the Sandhole Centre was the cause of all three outbreaks.

(2) That in some way meat which was sound when sent to the Sandhole Centre became contaminated after its arrival, probably by the Staphylococcus Aureus.

(3) That steps should be taken to ascertain the manner of contamination, with a view to preventing its recurrence.

(4) That pending a precise solution of the problem, pressed beef should not be used, and that additional precautions, including the wearing of face-masks, should be taken in the preparation of the food at the Sandhole Centre.

A vigorous investigation commenced at once, the bacteriology being undertaken by the Public Health Laboratory, Manchester.

Swabs were taken from:—

(a) The nose and throat of some 47 workers at the Sandhole Centre, and additionally from sores present on five of them.

(b) The throats of three other workers.

(c) The bench on which the "B" pack was prepared.

(d) The bread-slicing machine.

(e) The surface of the pressed beef.

The results were as follow:—

(a) In eight instances the Staphylococcus Aureus was isolated from the nose and in one instance from the throat. Further, it was isolated from lesions on the hands of two of the workers.

(b) A similar organism was isolated from one of the three throat swabs taken from other workers.

(c) and (d) were negative, but from

(e) a Staphylococcus Aureus was isolated.

Moreover, the following specimens were submitted:—

(i) Vomit of patients—six. These had been taken prior to the conference.

(ii) Faeces of patients—six. These were submitted by hospitals and were examined for the Salmonella and Dysentery groups.

(iii) Food—"B" packs, margarine, pressed beef, corned beef.

(iv) Brine.

The following results were obtained:—

- (i) In four of the vomit specimens a *Staphylococcus Aureus* was present.
- (ii) The specimens of faeces did not contain the organisms of the *Salmonella* or Dysentery group.
- (iii) A *Staphylococcus Aureus* was isolated from the sandwiches of the "B" pack, but the rest were negative.
- (iv) The brine was negative.

Thus, the *Staphylococcus Aureus*, while not isolated from all the specimens of vomit and pressed beef, nor from all the workers, was found in the vomit of a number of persons affected, in a number of sandwiches, on the surface of the pressed beef, and in the nose and throat and on the hands of a number of workers. These findings suggested very strongly indeed that the outbreak was due to contamination of the pressed beef of the "B" pack by the *Staphylococcus Aureus*, as had been thought by the conference. In an effort to put the matter beyond all reasonable doubt, and to discover the person or persons contaminating the meat, some of the organisms isolated were typed in order to discover their strain. The *Staphylococci* from three specimens of vomit, from four sandwiches, from the only swab taken of the pressed beef, and the *staphylococci* isolated from two swabs, viz., from the hand and throat of one of the individuals, and from a nasal swab of another, were shown to be identical in type.

In this way the source of the trouble was narrowed down to two individuals, either or both of whom could have contaminated the pressed meat. It is, however, most probable that the hand of the one individual was the vehicle of contamination. This individual was later swabbed with negative results. The other suspect left the service and could not be traced.

The investigation, apart from that portion of it set out above, was of a most detailed character, including as it did examination of the preparation, storage, and distribution of the food supplied to the miners. No exception could be taken to the quality of the meat supplied to the Cooking Centre, nor to the general arrangements at the centre. A number of interesting points emerged, however, during the investigations. Amongst them were—

- (i) The fact that, although sandwiches from the same batch were issued to the night-shift on the 26th September at about 10 p.m. and to the day-shift on the 27th September at about 6 a.m., illness occurred only amongst members of the day-shift. Thus, 189 "B" packs were issued to the night-shift, but no illness resulted. To the day-shift, 1,472 "B" packs were issued and there were 167 victims.

Sandwiches were made at the cooking centre on the day of despatch, and were sent in a batch to the collieries at 3 p.m. They were issued to the night-shift at 10 p.m. and to the day-shift at 6 a.m. the following morning. They were eaten about five hours after issue. It seems clear that some change occurred in the sandwiches between about 3 a.m. and 11 a.m. on the 27th September, and it is thought that during this period the organism elaborated additional toxin in sufficient quantity to cause illness amongst those members of the day-shift consuming the contaminated sandwiches.

The temperature of the storage accommodation for the sandwiches at the affected collieries was taken. There was, however, no correlation between these temperatures, which varied from 35°F. in a refrigerator to 74°F., and the number of cases which arose.

- (ii) The temperature of the refrigerator, normally 35°F., in which the meat, after pickling and pressing, was kept, did not destroy the contaminating organisms. A *Staphylococcus Aureus* of the type found in the specimens of vomit examined, was isolated from the meat in the refrigerator.

There was little new in the outbreak, but a study of it indicates:—

- (a) The desirability of bearing in mind during an investigation into outbreaks of food-poisoning the possibility of the *Staphylococcus Aureus* as a causative organism.
- (b) The importance of close co-operation by all Sanitary Authorities who may be concerned in an outbreak.
- (c) The importance of enlisting for field investigations the help of a bacteriologist with full laboratory facilities at his disposal.

From the preventive aspect, the outbreak illustrates the importance of ensuring that persons engaged at cooking centres and other places where food is prepared for consumption are informed of the potential sources of contamination of the food they are handling, and particularly that lesions on the hands and forearms are dangerous.

Food and Drugs Act, 1938, etc.—The following paragraphs and tables have been extracted from the Annual Report of the County Analyst, G. H. Walker, Esq., Ph.D., B.Sc., F.R.I.C.:—

The Food and Drugs Act, 1938, came into operation on the 1st October, 1939, and most of its provisions are still in force to-day, although it has to some extent been directly or indirectly amended by a more recent Act affecting drugs and by the long list of food regulations made by the Minister of Food during and subsequent to the war.

The following, by no means complete, list of Acts and Regulations at present in force, gives some idea of the thoroughness of the steps taken by the Government to ensure supplies of unadulterated foods and drugs and to prevent false or misleading labels and advertisements in relation to these commodities.

- (a) *Acts.*
 The Food and Drugs Act, 1938.
 The Pharmacy and Poisons Act, 1933.
 The Pharmacy and Medicines Act, 1941.

(b) *Regulations.*

The Sale of Milk Regulations, 1939.

The Public Analysts Regulations, 1939.

The Public Health (Preservatives, etc., in Food) Regulations, 1925-40.

The Public Health (Condensed Milk) Regulations, 1923-43.

The Public Health (Dried Milk) Regulations, 1923-43.

The Heat-Treated Milk (Prescribed Tests) Order, 1944.

(c) *Ministry of Food Regulations.*

The Food Substitutes (Control) Order, 1941.

The Defence (Sale of Food) Regulations, 1943.

The Food Standards (General Provisions) Order, 1944.

Various Standards Orders (published 1944 onwards).

The Labelling of Food (No. 2) Order, 1944.

Regulation 60 C.A.A. (1944) amending the Defence (General) Regulations, 1939, and relaxing provisions relating to food preservatives, condensed milk, etc.

Numerous Orders relating to individual foods or related groups of foods.

In addition to the above, special mention should be made of certain amended or consolidated Orders relating to food which have come into force during the year 1946:—

The Meat Products, Canned Soup and Canned Meat (Control and Maximum Prices) Order.

The Soft Drinks Order.

The Food Standards (Self-Raising Flour) Order.

The Food (Preserves) Order.

The Flour Confectionery (Control and Maximum Prices) Order.

The Labelling of Food Order.

The above list is, in itself, sufficiently formidable but when it is pointed out that there are in force to-day some 500 Orders relating to about 100 different foods or classes of food, some idea will be gained of the tremendous increase which has occurred in food legislation since the commencement of the war.

TOTAL SAMPLES EXAMINED.—During the year 1946, a total of 4,996 analyses and tests have been carried out in the County Laboratory. The total number of samples analysed in the year is compared with the total numbers, similarly classified for the years 1912-45 in the table below:—

Total number of Samples examined, 1912-46.

Year	County Food and Drugs	Other Authorities Food and Drugs	County Appeal-to-cow samples	Other Authorities Appeal-to-cow samples	Fertilisers and Feeding Stuffs Act	Waters and effluents	Miscellaneous and departmental	Total
1912-35	118,171	—	1,593	—	496	1,812	2,105	124,177
1936	4,808	—	58	—	21	57	115	5,059
1937	5,153	—	93	—	30	72	196	5,544
1938	5,157	—	89	—	20	73	178	5,517
1939	4,775	21	99	1	25	47	83	5,051
1940	3,257	423	60	3	21	46	20	3,830
1941	2,583	385	5	16	25	26	15	3,055
1942	2,088	325	11	5	16	19	28	2,492
1943	2,058	326	6	5	24	24	22	2,465
1944	1,816	540	2	4	28	35	15	2,440
1945	1,731	292	3	16	17	58	8	2,125
1946	4,122	576	107	8	29	51	103	4,996
1912-46	155,719	2,888	2,126	58	752	2,320	2,888	166,751

FOOD AND DRUGS SAMPLES.—Section 68(1) of the Food and Drugs Act, 1938, authorises arrangements to be made for the taking of samples for analysis by the Public Analyst. It reads:—

“An authorised officer of a Food and Drugs Authority . . . may exercise such powers of procuring samples of food and drugs for analysis . . . as are conferred upon him by this section, and any such officer is in this Act referred to as a ‘Sampling Officer’.”

In the County of Lancaster this work was formerly carried out by the Police, the Superintendents being appointed “Sampling Officers”. In August, 1940, however, the work was taken over by the County Sanitary Officers and in the year under review four Assistant County Sanitary Officers were appointed to deal with the growing volume of work and to restore it to its pre-war level.

Total Adulteration.—During the year under review, 4,122 samples of foods and drugs were submitted for examination under the Act, and of these, 315 were reported against; the adulteration was, therefore, 7.6 per cent. This represents a slight decrease compared with the percentage of adulteration for the previous year when the figure was 8.0 per cent.

In the following table the percentages of adulteration are given for the past 10 years. It will be seen that during that period the lowest figure was 3·6 which was reached in 1939 and that the average figure is 5·8, so that the percentage of adulteration for the year 1946, which is 7·6, is above that of the average for the past 10 years. In general, the adulteration during and subsequent to the war is very considerably greater than that found in the preceding years.

Percentage of Adulteration of County Samples of Foods and Drugs, 1937-46.

Year	Total No. of Samples	No. of adulterated samples	Percentage of adulteration
1937	5,153	196	3·8
1938	5,157	217	4·2
1939	4,775	171	3·6
1940	3,257	153	4·7
1941	2,583	239	9·3
1942	2,088	142	6·8
1943	2,058	172	8·4
1944	1,816	163	9·0
1945	1,731	138	8·0
1946	4,122	315	7·6
1937-46	32,740	1,906	5·8

Analysis.—The point raised in the preceding paragraph is perhaps brought out more clearly in the table below where the percentage of adulteration over the last 10 years is given side by side with the various types of samples and with the number of samples taken per 100,000 of the population. It will be noted that throughout all the war years the rate of sampling dropped very considerably; in fact for the years 1942-45 inclusive, it was only half of that for the years immediately prior to the war. During the year under review, notwithstanding the fact that for several months the laboratory was understaffed, the rate of sampling has been restored to its pre-war level, but without, as yet, causing the adulteration rate to show any noticeable reduction.

Year	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Percentage of adulteration	3·8	4·2	3·6	4·7	9·3	6·8	8·4	9·0	8·0	7·6
Total samples	5,153	5,157	4,775	3,257	2,583	2,088	2,058	1,816	1,731	4,122
Formal samples	3,171	3,304	3,024	2,044	1,525	1,236	1,234	912	870	1,648
Informal samples	1,982	1,853	1,751	1,213	1,058	852	824	904	861	2,046
Private samples	—	—	—	—	—	—	—	—	—	428
Number of samples per 100,000 of the population	302	299	274	244	193	161	156	136	135	321

MILK.—Adulteration.—The number of milk samples submitted under the Food and Drugs Act during the year was 2,669, and of these, 272 were reported against; the amount of adulteration was, therefore, 10·2 per cent. This figure is substantially the same as that for the last five years, and is probably entirely due to circumstances brought about by the war. It will be noticed that an increased number of samples of milk was examined during the year under review and it is to be expected that the adulteration rate will slowly improve. Details of milk adulteration in the County over the last 10 years are given in the following table:—

Percentage of Adulteration of Milk Samples, 1937-46.

Year	No. of samples	No. of adulterated samples	Percentage of adulteration
1937	3,185	162	5·1
1938	3,309	172	5·2
1939	3,029	157	5·2
1940	2,084	139	6·7
1941	1,861	222	11·9
1942	1,506	132	8·8
1943	1,459	157	10·8
1944	1,197	135	11·3
1945	1,096	111	10·1
1946	2,669	272	10·2
Totals	21,395	1,659	7·7

Average Composition.—In the table below the average composition of all the milk samples examined is set out for the period 1910-46. It will be seen that the average figure for fat does not vary greatly from year to year. In respect of solids-not-fat there is very little difference in the averages for the years 1910-40. Since 1940, however, it will be noted there is an appreciable decrease in solids-not-fat, the lowest figure of 8.55 per cent. being obtained in the year 1943. The average for solids-not-fat for the year under review was 8.58 per cent. Comparison of the preceding table with that below brings out the fact that the six years during which the average solids-not-fat have been lower than formerly are the same years which show an increased rate of adulteration.

Average Composition of Milk Samples, 1910-46.

Year	Number of samples	Fat per cent.	Solids-not-fat per cent.	Total Solids per cent.
1910-30	56,028	3.67	8.90	12.57
1931	3,090	3.84	8.81	12.65
1932	3,205	3.77	8.85	12.62
1933	3,060	3.76	8.82	12.58
1934	3,310	3.74	8.81	12.55
1935	3,422	3.75	8.84	12.59
1936	3,098	3.73	8.88	12.61
1937	3,278	3.74	8.84	12.58
1938	3,398	3.70	8.78	12.48
1939	3,128	3.67	8.78	12.45
1940	2,144	3.70	8.79	12.49
1941	1,866	3.70	8.64	12.34
1942	1,516	3.75	8.66	12.41
1943	1,489	3.70	8.55	12.25
1944	1,197	3.69	8.57	12.26
1945	1,096	3.72	8.57	12.29
1946	2,776	3.75	8.58	12.33
1910-46	97,101	3.70	8.84	12.54

ARTICLES OTHER THAN MILK.—*Adulteration.*—During the year under review 1,453 samples other than milk were examined. Of these, 43 were reported against, which corresponds to an adulteration rate of 2.9 per cent. The percentage of adulteration in articles other than milk was, therefore, very considerably lower than that for milk.

PROSECUTIONS.—During the year, a total of 315 County food and drugs samples were reported upon adversely and in respect of 94 of these, prosecutions were instituted, 92 in respect of milk samples and two in respect of samples of rum. There were 92 convictions and two dismissals; the total fines and costs amounting to £936. 7s. 9d. This figure is the highest obtained in the County even as far back as 1912, the year when the Laboratory first came under the direct control of the County Council. The next highest total for fines was £902. 9s. 7d. obtained in the year 1918.

ICE-CREAM.

In view of the wide interest taken in the purity and composition of ice-cream, since the ban on its manufacture was lifted in 1945, a brief account of its nature considered mainly from a chemical standpoint is given in the following paragraphs.

Originally ice-cream was a luxury article made from fresh cream, milk, eggs, sugar and flavouring material. During the present century, however, its sales have increased tremendously and its manufacture has become the centre of an important industry. In order to bring it within the purchasing range of all classes of the community the use of fresh cream and eggs in its composition has been greatly reduced or even discontinued entirely and their effects simulated by such commodities as gelatine and starch. Within the last 30 years many manufacturers have made quite nutritious ice-cream by reconstituting butter and milk powder with sugar, water and flavouring and stabilising ingredients. The position immediately prior to the war was that ice-cream could be divided into two types:—(a) that made by large-scale manufacturers, which had a reasonable butter fat content (8 to 14 per cent.) with milk solids-not-fat usually supplied by milk and milk powder, and about 12 per cent. of cane sugar; the total solids usually amounting to about 36 per cent., (b) that sold by small dealers who often made their products with custard powder or proprietary ice-cream mixes. The fat content of this type was generally below 3 per cent.

When the sale of ice-cream was again permitted in the year 1945, allocations of fat and sugar were made to manufacturers; at first these were supplemented with allocations of skim milk powder but the supply position has made it impossible to make further allocations of this last ingredient. Restrictions in the use of fresh milk and butter have had their effect in lowering the quality of ice-cream as compared with the pre-war product and many proprietary mixes and formulae have been devised to give the necessary consistency and the best available food value. Ingredients which may be used include:—margarine, skimmed milk powder (if still available), lactalbumin, lactose, whey powder, processed flours, gelatine, soya flour, cane sugar, glucose, and stabilisers and emulsifiers of the nature of sodium alginate and glycerin-monostearate.

Although certain countries have had standards for ice-cream for a number of years (for example, in the United States there are standards for butter fat content varying from 8 to 14 per cent., some States, in addition, specifying standards for milk solids) this country has, as yet, not established a standard for this commodity. Just before the war the "Ice-Cream Manufacturers' Association of Great Britain and Ireland" proposed a standard of not less than 8 per cent. milk fat and not less than 10 per cent. milk solids-not-fat; this was never made statutory. When the manufacture of ice-cream was recommenced after the war, the question of a standard was again raised, but the Minister of Food at a Press conference in September, 1945, stated that he was not prepared to set up a minimum standard which due to the exigencies of the time, would impose hardship on many members of the trade and which might prejudice agreement on a really good standard when supplies of the necessary ingredients are more normal. There seems little doubt that a really satisfactory standard should include both a butter-fat content and a milk solids-not-fat content; both of which appear impossible while dairy produce is rationed and in short supply. In establishing a standard or standards for ice-cream, consideration would have also to be given to the effect in relation to the standard of selling one and the same commodity under various names such as cream-ices, ice-cream or simply ices.

Although no chemical standards have yet been established for ice-cream, the Minister of Health in October of the year under review published draft regulations cited as the Ice-Cream (Heat Treatment) Regulations, 1946, with a view to improving the hygienic quality of ice-cream. Briefly, the draft regulations (which have since been confirmed) require that all ice-cream, except complete cold mix powders, must be heat-treated either at 150°F. for 30 minutes or at 160°F. for 10 minutes. In addition, conditions are laid down as to the temperatures at which mixtures must be kept both before and after heat-treatment. The authorities responsible for enforcement will be Local Authorities within the meaning of section 64 of the Food and Drugs Act, who already have certain powers in regard to ice-cream under sections 13, 14, 16 and 37 of the Act. The enforcement of the heat-treatment requirements will be exceedingly difficult and will necessitate constant direct supervision of plant and processing on the part of local authorities, particularly as no statutory tests are contemplated which could be carried out on representative samples and which would indicate whether processing had been satisfactory. The phosphatase test which is used to determine adequate heat-treatment of milk is not applicable to ice-cream. Further, although bacteriological tests are prescribed in a number of other countries, the Minister of Health has been advised that there is no test which has yet been devised for the safety of ice-cream, although bacteriological tests may usefully be employed as an indication of possible faulty methods of manufacture. More recently the Minister has confirmed these views but has also drawn attention to a form of methylene blue test which would appear to be the best available guide as to the bacterial cleanliness of ice-cream.

During the year 1946, a total of 45 samples of ice-cream were submitted for chemical analysis, 25 by County Sampling Officers and 20 by other Local Authorities. No deleterious ingredients were present in any of the samples, except that in the case of one sample submitted by a County Sampling Officer, a number of dead mites were found. In view of the supply position and the fact that no standard has been fixed by the Ministry of Food for the composition of ice-cream, none of the samples was reported upon adversely in respect of constituents, although in many cases the fat content was below 1 per cent. The average figure found for total solids was 22.5 per cent. (maximum 36.8, minimum 13.3) and for fat content the average was 2.3 per cent. (maximum 10.7, minimum 0.1). Four of the samples had fat contents of 7.7, 7.7, 9.1 and 10.7 per cent. respectively, figures which were outstanding as compared with those of the bulk of the samples.

PREVALENCE OF, AND CONTROL OVER, INFECTIOUS DISEASES

Smallpox.—No case of smallpox occurred during 1946—the eighth successive year that the Administrative County has been entirely free from this disease.

During May, 1946, suspected cases of smallpox were reported from four County districts. Each case was visited immediately but none proved to be smallpox.

The occurrence of smallpox on ships arriving in this country from the Middle and Far East—all the passengers thus being contacts or potential contacts—occasioned a considerable amount of work during the year. Notification of the arrival of vessels, together with lists of names and addresses of the persons concerned, were received from the Port Medical Officers. From these lists the names of those persons proceeding to addresses in the Administrative County were extracted, and in each case the local Medical Officer of Health was informed immediately in order that he might keep the contacts under observation during the incubation period and, when necessary, offer vaccination.

Despite the large number of contacts entering the Administrative County (almost 600), none developed smallpox.

Scarlet fever.—There was once again a very considerable decrease in the incidence of scarlet fever in the Administrative County during 1946. The notifications numbered 2,794, with three deaths, as compared with 4,453 and five deaths in the previous year. This is the lowest number of cases of scarlet fever since the year 1917, when there were 2,655 notifications. The deaths in that year, however, numbered 56.

The notifications of this and other infectious diseases are shown grouped in age periods in the table on page 56.

The mortality rate from scarlet fever in 1946 was equivalent to 0.001 per 1,000 of the estimated civilian population, or 0.001 less than in the previous year. The case fatality rate was 0.10 per cent. as compared with 0.11 per cent. on 1945.

Scarlet fever cases removed to hospital in 1946 represented 64.0 per cent. of the total notifications. The case fatality rate of patients treated in hospital was 0.11 per cent., and of those isolated at home, 0.09 per cent.

Diphtheria.—The number of notifications of diphtheria in 1946 at 654 constituted yet another new low record in the County statistics and was 483 less than the low record established in 1945. The number of deaths registered as due to diphtheria was 25 or 27 less than in 1945, representing a mortality rate of 0.01 per 1,000 of the estimated civilian population. The rate in 1945 was 0.02 per 1,000 of the population.

The decline in the number of cases of diphtheria over the last few years has been really phenomenal as will be seen from a reference to the review of Diphtheria Immunisation on page 59.

Of the 654 cases of diphtheria notified during 1946, 134 were amongst children under 5 years of age, 328 amongst those between the ages of 5 and 15 years, and 192 amongst the older age groups. The case fatality rate amongst the under-fives was 8.20 per cent., 2.74 per cent. amongst those between 5 and 15 years and 2.60 per cent. amongst those over 15 years of age. In respect of all children under the age of 15 years the case fatality rate was 4.32 per cent.

Cases removed to hospital during 1946 numbered 633 or 96.7 per cent. of the total cases notified.

Typhoid and paratyphoid fevers.—The number of notifications of typhoid and paratyphoid fevers during 1946 was 48 or 20 more than in the previous year. Four deaths were assigned to this cause, representing a death-rate of 0.002 per 1,000 estimated civilian population. There were no deaths in 1945. Eighty-six County districts were entirely free from typhoid and/or paratyphoid fevers during 1946.

Although there was a slight increase in the incidence of these fevers in 1946, the striking reduction in their prevalence will be noted from the fact that in 1898 the cases notified in the Administrative County numbered 2,661 and the deaths 478.

Measles (excluding rubella).—This disease has been included amongst those classed as compulsorily notifiable since February, 1940. During 1946, the number of cases notified was 9,100—a decrease of 4,783 as compared with the previous year. The deaths registered as due to this cause numbered nine—14 less than in 1945—resulting in a mortality rate of 0.004 per 1,000 estimated civilian population.

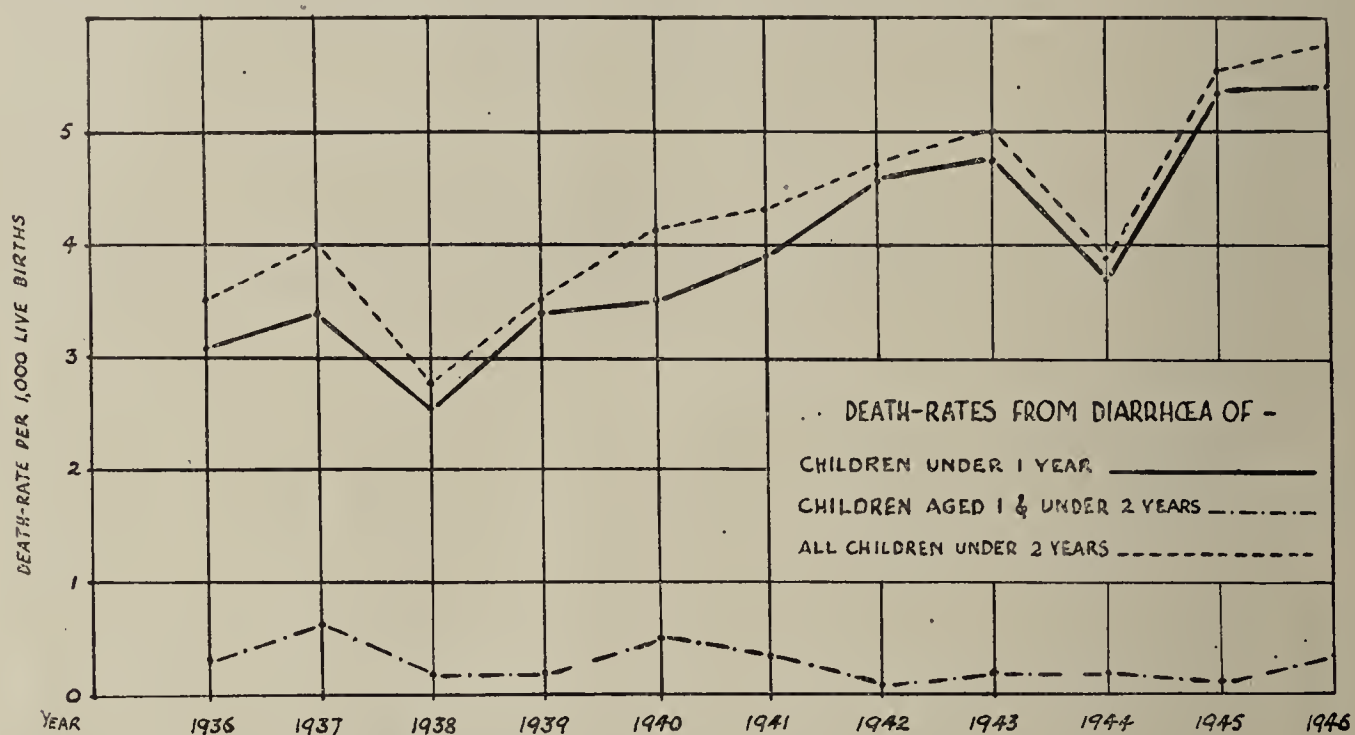
An analysis of the deaths shows that all occurred amongst children under 5 years, 33.3 per cent. being infants under 1 year of age and 66.6 per cent. children between the ages of 1 and 5 years.

Whooping cough.—As in the case of measles, this disease was made compulsorily notifiable in 1940. The number of cases notified in 1946 totalled 4,348 or 1,474 more than in 1945. The deaths registered as due to whooping cough numbered 43—an increase of 14 over those in the previous year—the consequent death-rate being 0.02 per 1,000 of the estimated civilian population, the same as the provisional rate for the country as a whole.

Diarrhoea (under 2 years).—There was once again an increase in the number of deaths of children under 2 years of age registered as due to diarrhoea. They totalled 207 or 34 more than in the previous year. The corresponding death-rate per 1,000 live births was 5·8—1·4 per 1,000 greater than the provisional rate for England and Wales.

Over the past few years the number of deaths of children under 2 years of age due to this cause has shown an upward trend although the rise has been irregular. Invariably more than 90 per cent. of these deaths actually relate to children under 12 months old and it is amongst such infants that the increasing mortality is to be found. This is amply illustrated by the graph here inserted which shows the trend of the mortality rate per 1,000 live births since 1936 of infants under 1 year of age compared with that of children over 1 and under 2 years and with the rate for all children under 2 years of age. This upward trend in infant mortality due to diarrhoea and enteritis naturally adversely affects the improvement now being established in the infant mortality rate from all causes.

Mortality from Diarrhoea (under 2 years of age).



Neo-natal Gastro-enteritis.—During the early part of December, 1946, much publicity was given to outbreaks of illness in newly-born infants in certain maternity hospitals in several parts of the country. The disease had a considerable fatality rate and was deemed to be so serious as to call for the temporary closure of the hospitals concerned.

To paediatricians the illness was not a new and “mysterious” disease, but was recognised as a form of gastro-enteritis related to the type often found in older infants known as “summer diarrhoea”. Gastro-enteritis amongst new-born babies has occurred sporadically in this country for many years, but it assumed epidemic proportions in the latter part of 1946. Epidemics have from time to time been reported in the United States of America.

The onset of the illness usually occurs during the first three or four weeks after birth and is characterised by loss of weight followed by diarrhoea. In severe cases toxæmia, diarrhoea and dehydration may lead to death. As might be expected premature and weakly babies are less resistant to the disease and among them the death-rate is relatively high. Breast-fed babies are not immune, but usually suffer from a mild form of the disease. Mothers and nursing staff may also be affected.

Bacteriologically the cause of the gastro-enteritis cannot be stated with precision. Investigations have resulted in the identification of several organisms of which more than one has been suspected. But whatever the causal organism there is no doubt that outbreaks of the disease in epidemic form are fostered by unhygienic conditions in the maternity units. Such a state of affairs is liable to exist in overcrowded and insufficiently staffed units which are, unfortunately, found all too often at the present time when there is an acute shortage of trained nursing staff and a great demand for maternity accommodation.

The most effective measure to combat an epidemic is closure of the unit, followed by a careful review of the technique of infant feeding and management. At the same time it is necessary that full consideration should be given to the standard of staffing in the nursery.

The maternity hospitals in the Administrative County including those under the control of the County Council were not involved in any specific outbreak of the illness. Steps were, however, taken to obtain the fullest possible information as to the deaths of infants under the age of 6 weeks in each of the County districts. The reports from these districts, covering the period 1st January, 1946, to 14th December, 1946, were summarised and an analysis thereof follows.

The table below shows that during the period mentioned the total number of deaths of infants under 6 weeks of age registered as belonging to the districts in the Administrative County was 887, of whom 51 or 5·74 per cent. were certified as having died from gastro-enteritis either as a single cause or in conjunction with other causes. Of these 51 deaths, 29 were due entirely to gastro-enteritis, 17 to gastro-enteritis coupled with other causes and five to associated conditions, e.g., diarrhoea, enteritis.

	Total deaths under 6 weeks of age (all causes)	No. of deaths from gastro-enteritis	Percentage of gastro-enteritis deaths to deaths from all causes	Where child born		
				Home	Hos-pital	Not known
Urban Districts	769	38	4·94	12	17	9
Rural Districts	118	13	11·01	2	10	1
Administrative County	887	51	5·74	14	27	10

It will be seen that of the 51 deaths due or partly due to gastro-enteritis, 27 or 52·9 per cent. related to babies born in hospitals, and 14 or 27·5 per cent. to domiciliary births. Of the remaining 10 (or 19·6 per cent.) no particulars of place of birth were available.

A further analysis shows that 12 of the 51 babies who died were born in hospitals outside the Administrative County area and 15 in hospitals situated in the Administrative County. Of the latter, 12 of the births took place in the County Hospital, Whiston, and one in the Eaves Lane Hospital, Chorley. The monthly incidence of the deaths of the 12 babies born in Whiston County Hospital is shown below:—

Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
—	—	—	1	1	—	2	5	2	—	1	—

The monthly incidence of the total deaths in the Administrative County is given in the following table. It will be noticed that although during the period July to October inclusive, the number of deaths was slightly higher than in the remaining months, there is no evidence that the disease occurred in epidemic form.

Monthly incidence of deaths.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Urban Districts	5	1	4	5	1	2	8	4	4	3	1	—
Rural Districts	1	1	1	—	2	—	—	2	1	3	1	1
Administrative County	6	2	5	5	3	2	8	6	5	6	2	1

The ages at death of the 51 babies are given in the table following, from which it will be seen that 31 or 60·7 per cent. were over 2 weeks and under 5 weeks old at death.

Ages at death.

	Under 1 week	1 week	2 weeks	3 weeks	4 weeks	5 weeks	Not known
Urban Districts	2	4	10	5	8	5	4
Rural Districts	—	3	2	4	2	2	—
Administrative County	2	7	12	9	10	7	4

It would appear, therefore, from such details as are available that no more than what might be termed the usual and expected incidence of neo-natal gastro-enteritis obtained in the Administrative County area during the year 1946. A maternity unit in a hospital within the Geographical County, however, suffered a localised epidemic and had to be closed for a short period.

Acute poliomyelitis, acute polio-encephalitis, encephalitis lethargica, cerebro-spinal fever.—The incidence of these diseases compared with the previous year, and also the attack rates and mortality are shown in the following table:—

Disease	Cases notified		Distribution of cases, 1946		Attack rate per 1,000 population, 1946	Deaths registered	
	1945	1946	Urban Districts	Rural Districts		1945	1946
Acute poliomyelitis	11	21	16	5	0·01	} 4	7
Acute polio-encephalitis	2	1	1	—	0·0005		
Encephalitis lethargica	7	1	1	—	0·0005	*46	*41
Cerebro-spinal fever	74	67	54	13	0·03	30	15

* Deaths from acute infectious encephalitis (lethargic or epidemic).

The table below, which is compiled from the quarterly returns of local Medical Officers of Health, shows the numbers of cases of infectious diseases notified during the year 1946 after corrections subsequently made either by notifying medical practitioners or by medical superintendents of infectious diseases hospitals:—

NOTIFICATIONS OF INFECTIOUS DISEASES (AFTER CORRECTION) FOR THE YEAR ENDED
31ST DECEMBER, 1946, ANALYSED BY SEX AND AGE.

Scarlet fever	Diphtheria	Whooping cough	Measles (excluding rubella)	Acute poliomyelitis	Acute poliomyelitis	Sex	Age group	Sex	Acute pneumonia	Dysentery	Smallpox	Acute encephalitis lethargica	Enteric or typhoid fever	Paratyphoid fevers	Erysipelas	Cerebro-spinal fever
Administrative County																
1,277	323	2,003	4,593	9	1	M.	All	M.	929	373	—	1	6	11	176	38
1,517	331	2,345	4,507	12	—	F.	ages	F.	732	356	—	—	19	12	232	29
2,794	654	4,348	9,100	21	1	T.		T.	1,661	729	—	1	25	23	408	67
6	9	187	155	—	—	M.	0—									
6	2	209	175	—	—	F.										
12	11	396	330	—	—	T.										
109	27	650	1,089	1	1	M.	1—	M.	173	13	—	—	1	—	1	10
77	20	694	1,047	3	—	F.										
186	47	1,344	2,136	4	1	T.										
204	46	657	1,547	—	—	M.	3—									
225	30	794	1,444	2	—	F.										
429	76	1,451	2,991	2	—	T.										
573	100	470	1,638	2	—	M.	5—									
680	87	593	1,672	2	—	F.										
1,253	187	1,063	3,310	4	—	T.										
245	75	25	97	3	—	M.	10—	M.	129	29	—	1	1	6	2	14
337	66	29	99	1	—	F.										
582	141	54	196	4	—	T.										
82	31	6	38	1	—	M.	15—	M.	272	189	—	—	3	2	49	12
119	58	8	43	1	—	F.										
201	89	14	81	2	—	T.										
							25—									
53	33	6	21	2	—	M.	45—	M.	232	119	—	—	1	2	79	1
71	68	14	22	3	—	F.										
124	101	20	43	5	—	T.										
							65—	M.	118	22	—	—	—	—	44	1
							Un-known	M.	5	1	—	—	—	1	1	—
5	2	2	8	—	—	M.										
2	—	4	5	—	—	F.										
7	2	6	13	—	—	T.		T.	8	14	—	—	—	3	3	—

Other Notifiable Diseases.

	Puerperal pyrexia	Ophthalmia neonatorum			Malaria (contracted in this country)			Undulant fever			Relapsing fever			* Chickenpox			† Pemphigus neonatorum		
	F.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Administrative County	168	36	46	82	1	—	1	—	1	1	1	—	1	143	159	302	1	2	3

* Notifiable in 10 districts only.

† Notifiable in 2 districts only.

The following table gives the notifications, total deaths, removals to hospital and deaths in hospital, of cases of infectious diseases during 1946 in the Urban and Rural Districts and the Administrative County as a whole:—

Infectious Disease	Urban Districts				Rural Districts				Administrative County			
	Notifi- cations	Total deaths	Re- movals to hospital	Deaths in hospital	Notifi- cations	Total deaths	Re- movals to hospital	Deaths in hospital	Notifi- cations	Total deaths	Re- movals to hospital	Deaths in hospital
Scarlet fever	2,246	3	1,401	2	548	—	389	—	2,794	3	1,790	2
Diphtheria	573	23	563	16	81	2	70	—	654	25	633	16
Whooping cough	3,830	41	70	9	518	2	7	—	4,348	43	77	9
Measles (excluding rubella).....	8,352	7	95	—	748	2	18	—	9,100	9	113	—
Ac. poliomyelitis	16	} 7	14	4	5	} —	1	—	21	} 7	15	4
Ac. polio-encephalitis	1		1	1	—		—	—	1		1	1
Ac. pneumonia (primary and influenzal)	1,470	*714	—	—	191	*101	—	—	1,661	*815	—	—
†Dysentery	365	—	22	—	364	—	2	—	729	—	24	—
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—
Ac. encephalitis lethargica	1	†38	1	3	—	†3	—	—	1	†41	1	3
Typhoid and paratyphoid fevers	41	3	15	1	7	1	6	—	48	4	21	1
†Erysipelas	370	—	64	—	38	—	2	—	408	—	66	—
Cerebro-spinal fever	54	14	46	7	13	1	9	—	67	15	55	7
<i>Other notifiable diseases</i>												
Puerperal pyrexia	146	11	70	2	22	2	5	—	168	13	75	2
†Ophthalmia neonatorum	80	—	45	—	2	—	1	—	82	—	46	—
†Malaria (contracted in this country)	1	—	—	—	—	—	—	—	1	—	—	—

* Deaths from pneumonia (all forms). † Deaths from these diseases are not available.

‡ Deaths from acute infectious encephalitis (lethargic or epidemic).

Below, comparison is made of the number of notifications of some of the principal infectious diseases during 1946 and the preceding 10 years:—

Infectious disease	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Typhoid and paratyphoid fevers	42	85	96	37	142	304	38	25	36	28	48
Scarlet fever	4,648	4,198	4,437	3,980	3,348	3,583	4,786	6,710	5,836	4,453	2,794
*Whooping cough	484	278	187	—	3,802	7,927	2,334	5,386	3,903	2,874	4,348
Diphtheria	3,025	2,855	4,571	3,297	2,772	3,354	2,169	1,760	1,450	1,137	654
Erysipelas.....	753	700	748	677	608	574	589	515	520	475	408
Smallpox	—	2	4	—	—	—	—	—	—	—	—
*Measles (excluding rubella).....	1,783	607	1,721	—	30,071	11,166	18,267	14,353	13,622	13,883	9,100
Acute pneumonia (primary and influenzal)	2,109	2,527	1,876	1,989	2,568	2,235	1,874	2,558	1,703	1,570	1,661
Puerperal pyrexia	212	217	328	311	279	246	284	248	207	139	168

* Prior to February, 1940, these diseases were not compulsorily notifiable.

The chief features of a comparison of the above notifications are the large decreases in the cases of scarlet fever and diphtheria and the steady reduction in the incidence of erysipelas.

Death-rates from the Principal Infectious Diseases.—The table below gives the death-rates per 1,000 of the population from the principal infectious diseases for the year 1946 and the preceding 51 years, showing the five years' averages:—

Year	Smallpox	Scarlet fever	*Diphtheria	†Typhoid and paratyphoid fevers	Measles	Whooping cough	‡Diarrhoea, etc.
1895.....	0·009	0·23	0·10	0·23	0·50	0·38	0·95
1896.....	0·005	0·24	0·09	0·23	0·49	0·36	0·48
1897.....	nil	0·15	0·08	0·19	0·66	0·27	0·77
1898.....	0·0005	0·10	0·07	0·26	0·25	0·19	1·00
1899.....	0·0005	0·18	0·18	0·24	0·44	0·26	1·05
Average 5 years, 1895-1899	0·0003	0·18	0·10	0·23	0·46	0·29	0·85
1900.....	0·0015	0·18	0·26	0·20	0·43	0·37	0·60
1901.....	nil	0·18	0·34	0·20	0·18	0·20	0·95
1902.....	0·0119	0·20	0·30	0·16	0·35	0·19	0·28
1903.....	0·0366	0·18	0·19	0·15	0·37	0·26	0·40
1904.....	0·0116	0·18	0·15	0·12	0·43	0·35	0·66
Average 5 years, 1900-1904	0·0123	0·18	0·24	0·16	0·35	0·27	0·57
1905.....	0·0033	0·13	0·15	0·14	0·26	0·15	0·52
1906.....	nil	0·11	0·16	0·14	0·36	0·13	0·79
1907.....	0·0005	0·09	0·15	0·09	0·37	0·28	0·26
1908.....	0·0005	0·10	0·16	0·12	0·18	0·24	0·54
1909.....	nil	0·12	0·15	0·10	0·35	0·14	0·18
Average 5 years, 1905-1909	0·0008	0·11	0·15	0·11	0·30	0·18	0·45
1910.....	nil	0·10	0·11	0·10	0·15	0·23	0·29
1911.....	nil	0·08	0·14	0·12	0·29	0·15	‡1·43
1912.....	nil	0·05	0·12	0·08	0·30	0·24	0·30
1913.....	nil	0·05	0·11	0·10	0·31	0·13	0·85
1914.....	nil	0·09	0·13	0·07	0·28	0·18	0·48
Average 5 years, 1910-1914	nil	0·07	0·12	0·09	0·26	0·18	0·67
1915.....	nil	0·08	0·14	0·07	0·49	0·20	0·52
1916.....	0·003	0·06	0·15	0·05	0·17	0·14	‡0·27
1917.....	nil	0·03	0·13	0·04	0·27	0·11	0·18
1918.....	nil	0·03	0·15	0·05	0·20	0·31	0·19
1919.....	nil	0·04	0·13	0·02	0·07	0·05	0·16
Average 5 years, 1915-1919	0·0006	0·04	0·14	0·04	0·24	0·16	0·26
1920.....	0·0005	0·03	0·11	0·03	0·19	0·09	0·25
1921.....	nil	0·03	0·09	0·02	0·04	0·15	0·27
1922.....	0·0005	0·05	0·08	0·02	0·20	0·12	0·13
1923.....	nil	0·03	0·05	0·02	0·07	0·11	0·12
1924.....	nil	0·02	0·05	0·01	0·14	0·13	0·13
Average 5 years, 1920-1924	0·0002	0·03	0·07	0·02	0·12	0·12	0·18
1925.....	nil	0·03	0·06	0·009	0·10	0·13	0·13
1926.....	0·0005	0·01	0·05	0·008	0·09	0·13	0·11
1927.....	0·0005	0·01	0·06	0·01	0·09	0·06	0·09
1928.....	0·0027	0·01	0·06	0·01	0·05	0·05	0·08
1929.....	0·0016	0·01	0·06	0·008	0·04	0·15	0·08
Average 5 years, 1925-1929	0·0010	0·01	0·05	0·009	0·07	0·10	0·09
1930.....	nil	0·02	0·06	0·008	0·11	0·03	0·08
1931.....	nil	0·01	0·05	0·007	0·03	0·05	0·06
1932.....	nil	0·01	0·06	0·007	0·07	0·06	0·05
1933.....	nil	0·01	0·06	0·006	0·03	0·04	0·05
1934.....	nil	0·02	0·08	0·003	0·06	0·03	0·05
Average 5 years, 1930-1934	nil	0·01	0·06	0·006	0·06	0·04	0·05
1935.....	nil	0·01	0·08	0·002	0·04	0·02	0·04
1936.....	nil	0·01	0·09	0·003	0·05	0·04	0·04
1937.....	nil	0·009	0·08	0·003	0·01	0·03	0·05
1938.....	nil	0·009	0·11	0·005	0·05	0·02	0·04
1939.....	nil	0·004	0·08	0·001	0·002	0·03	0·05
Average 5 years, 1935-1939	nil	0·008	0·08	0·002	0·03	0·02	0·04
1940.....	nil	0·001	0·07	0·001	0·02	0·02	0·05
1941.....	nil	0·003	0·09	0·005	0·01	0·06	0·06
1942.....	nil	0·006	0·05	0·0005	0·01	0·01	0·07
1943.....	nil	0·002	0·03	0·002	0·01	0·03	0·08
1944.....	nil	0·004	0·03	0·0005	0·01	0·01	0·07
Average 5 years, 1940-1944	nil	0·003	0·05	0·001	0·01	0·02	0·06
1945.....	nil	0·002	0·02	nil	0·01	0·01	0·09
1946							
Administrative County.....	nil	0·001	0·01	0·002	0·004	0·02	0·10
Urban Districts.....	nil	0·001	0·01	0·001	0·004	0·02	0·10
Rural Districts.....	nil	nil	0·007	0·003	0·007	0·007	0·14
§England and Wales.....	nil	0·00	0·01	0·00	0·00	0·02	0·08

* From 1899 membranous croup included. † Prior to 1911 the "fever" death-rate included deaths from typhus and continued fevers (if any). ‡ From 1911 enteritis deaths included. Since 1916, the "diarrhoea" death-rate includes deaths from diarrhoea, etc., under two years of age only. § Provisional figures.

Tuberculosis.—The administration of the County Council's scheme for the diagnosis and treatment of tuberculosis is in the hands of the County Tuberculosis Committee, and is dealt with in the Annual Report for 1946 of the Central Consultant Tuberculosis Officer.

Disinfection.—The following statement, showing the position of the County districts in regard to the provision of disinfecting apparatus, is prepared from information supplied by local Medical Officers of Health:—

Districts provided with steam apparatus, or using steam apparatus at hospitals.....	64
„ using steam apparatus belonging to other districts (mainly County or Municipal Boroughs)	25
„ provided with dry heat apparatus or gas	2
„ without proper appliances	18

The number of houses or rooms disinfected during 1946 following the occurrence of infectious disease was 5,581, the method employed being chiefly the use of formaldehyde sprays and vapours.

DIPHTHERIA IMMUNISATION.

It was in 1913 that immunisation was first recognised as a successful protective agent. Little had, however, been done in the way of immunisation against diphtheria until, in 1922, the Ministry of Health issued to local authorities a memorandum on the supply and administration of diphtheria anti-toxin and on the use of the Schick test and methods of active immunisation for the prevention of diphtheria. Although this was followed in 1932 by a second memorandum on the production of artificial immunity against diphtheria, no real effort was made to introduce effective measures of immunisation for the general masses of population.

In Lancashire, by 1938, although diphtheria immunisation was being undertaken to a greater or lesser degree in some 40 County districts, in only 33 districts had definite immunisation schemes been introduced by local authorities. In that year the number of individuals immunised was as under:—

Pre-school children	School children	Adults	Total
1,932	9,355	80	11,357

In the same year the number of notifications of cases of diphtheria at 4,571 was the highest ever recorded in the County statistics. Of these cases, 83·3 per cent. were of children under 15 years of age (16·9 per cent. under 5 years of age and 66·4 per cent. aged 5 and under 15). The deaths numbered 203, of which 203 or 97·5 per cent. were of children under 15 years of age (37·0 per cent. under 5 years of age and 60·5 per cent. aged 5 and under 15).

It was recognised that one of the most important features of any scheme of immunisation is that it should be continuous and that it is essential that infants should be immunised as early as possible in order that the protection of the community may remain complete. Therefore, whilst it was preferable to obtain protection of at least 50 per cent. of school children, a much higher percentage of pre-school children should be attempted.

To this end and in order to assist local authorities to initiate and prosecute schemes with vigour, the County Council decided in 1938 to pay 50 per cent. of the cost of the immunisation of pre-school children in respect of schemes in the County Council Maternity and Child Welfare area.

This was followed a year later by a decision to contribute 50 per cent. of the cost of schemes of diphtheria immunisation of all children in any County district.

It was not, however, until late 1940 that, with the offer by the Ministry of Health of free prophylactics (the cost of which had previously fallen on the local rates), systematic immunisation was really started, but even then, owing to numerous war-time difficulties, no real progress was made until 1942. It was quickly realised, however, that by reason of the evacuation of children from towns where diphtheria was endemic to rural areas where it was comparatively rare, there was a danger of the disease becoming epidemic. Accordingly strenuous efforts were made to encourage the formulation of schemes of immunisation by local authorities and to make the public and, in particular, parents 'immunisation conscious' by means of posters, handbills, film showings and other forms of propaganda.

The campaign was undoubtedly successful and every local authority in the Administrative County now has a complete scheme of diphtheria immunisation. The table below clearly illustrates the extent to which immunisation has improved in the County districts since 1941 (i.e., before systematic immunisation got fully under way).

Percentage of child population immunised	No. of County districts			
	As at 31st December, 1941		As at 31st December, 1946	
	Children under 5 years	Children 5 and under 15 years	Children under 5 years	Children 5 and under 15 years
Under 20	25	7	3	—
20—	26	11	7	—
30—	31	29	42	4
50—	3	16	35	12
60—	4	20	16	35
75 and over	2	8	3	55
No return	18	18	3	3

The numbers immunised during the year 1946 as compared with those given protection in the year 1938 are shown below:—

Year	Numbers immunised during year			
	Pre-school children	School children	Adults	Total
1938	1,932	9,355	80	11,367
1946	21,684	7,078	77	28,839

Mention should here be made that the figures quoted in respect of 1946 do not fully indicate the extent to which immunisation was carried out. It is known, for example, that in a number of County districts immunisation has been carried out privately on a large scale and records in respect of children so immunised are not available.

It was estimated that by the end of 1946, some 68,813 or 48·2 per cent. of the children under 5 years of age had been protected, 185,100 or 74·9 per cent. of those between 5 and 15, and 254,423 or 65·2 per cent. of all children under 15 years of age. These percentages show increases over the previous year of 0·7, 5·0 and 3·2 respectively.

Turning now to the incidence of diphtheria over this period, 1938-46, as shown below, it will be seen that despite adverse conditions created by the war, some factor has operated to influence both the notifications and the deaths to the extent that each in 1946 was in the region of only 13 per cent. of what it was in 1938.

Year	No. of cases	No. of deaths	Case fatality rate per cent.
1938	4,571	208	4·5
1939	3,297	157	4·7
1940	2,772	137	4·9
1941	3,354	183	5·4
1942	2,169	105	4·8
1943	1,760	69	3·9
1944	1,450	68	4·6
1945	1,137	52	4·5
1946	654	25	3·8

It will be noted, however, that although the numbers of cases and deaths have declined, the percentage of deaths amongst the cases notified has not shown any significant variation throughout the period. Having in mind that very few deaths occur amongst those who have been immunised, it would appear that the most effective way of reducing mortality from the disease is to lessen the number of cases by artificial immunisation and so bring about a corresponding reduction in the number of deaths.

Whilst reliable statistics of the number of child population under 15 years of age in the County area are not available for earlier years, it is possible to obtain an approximate idea of the trend of the death-rates from diphtheria per 100,000 population under 15 years of age (amongst which population it has already been shown, the bulk of the cases occur). In 1938 diphtheria accounted for the deaths of 51 in every 100,000 children under 15 years of age in the Administrative County. In 1941, the figure had been reduced to 42, whilst in the succeeding five years the approximate rates were 23, 15, 16, 10 and 5.

Bearing in mind that it was not until 1942 that any great impetus was given to the implementation of schemes of immunisation, it is reasonable to assume that the influencing factor responsible for the decline in both the incidence of, and the deaths from, diphtheria was the artificial protection of children.

Undoubtedly the best evidence of the effect of immunisation is produced by a comparison of the behaviour of diphtheria amongst (a) the immunised and (b) the non-immunised, but, as yet, sufficient data for the County is not available over a number of years and therefore any observations are of necessity confined to a relatively short period, i.e., 1945 and 1946, which being so small an experience naturally limits the scope of the conclusions which may be drawn. The table here inserted, however, shows the notifications of, and deaths from, diphtheria in 1945 and 1946, together with the corresponding attack and case fatality rates in respect of both those immunised and those not so protected.

	Percentage of total population in age group		No. of cases of diphtheria		Attack rate per 1,000 of population in age group		No. of deaths from diphtheria		Case fatality rate per cent.	
	1945	1946	1945	1946	1945	1946	1945	1946	1945	1946
<i>Children under 5 years of age</i>										
Immunised	47.5	48.2	41	41	0.59	0.58	1	—	2.43	—
Not immunised	52.5	51.8	167	93	2.20	1.22	15	11	8.98	11.82
Total	100.0	100.0	208	134	1.44	0.91	16	11	7.68	8.20
<i>Children aged 5 to 14 years of age</i>										
Immunised	69.9	74.9	203	146	1.11	0.76	2	—	0.49	—
Not immunised	30.1	25.1	394	182	5.02	2.85	23	9	5.83	4.94
Total	100.0	100.0	597	328	2.28	1.08	25	9	4.18	2.74
<i>All children under 15 years of age</i>										
Immunised	62.0	65.2	244	187	0.97	0.51	3	—	1.22	—
Not immunised	38.0	34.8	561	275	3.63	2.35	38	20	6.77	7.27
Total	100.0	100.0	805	462	1.98	1.15	41	20	5.09	4.32

It will be seen from the above that by the end of 1946, of the children under 15 years of age, 65.2 per cent. had been immunised, leaving 34.8 per cent. not so protected. Of the non-immunised children, 275 or 2.35 per 1,000 in the age group contracted diphtheria, whilst only 187 or 0.51 per 1,000 of the immunised children were so attacked. The number of deaths in the two categories were 20 and nil respectively, whilst the case fatality rates per cent. were 7.27 and nil. The striking difference in the behaviour of diphtheria toward the two classes of children so described is perhaps best illustrated by the fact that whilst the death-rate per 100,000 amongst those immunised was nil, that amongst the non-protected amounted to slightly over 14.

Turning to a further examination of the notifications of diphtheria, it is found that in 1938, of the 4,571 cases notified, 3,812 or 83.4 per cent. were of children under 15 years of age. By 1946, this percentage showed a reduction of 12.8 to 70.6. It may also here be noted that of the diphtheria notifications in 1946 amongst children under 15 years of age, 29 per cent. were of children under 5, with 71 per cent. amongst those over that age. In 1945, the respective percentages were 25.8 and 74.1, whilst in 1938 they were 20.3 and 79.6.

Whilst bearing in mind that children who in 1938 were in the 0—5 group are now in the 5—14 group and many of the latter group have passed beyond school age and are therefore no longer accounted for, it appears evident that, if protective immunity is to be completely effective, a much greater effort directed toward the protection of the under-fives is demanded.

To this end in January, 1946, it became the responsibility of the County Council to ensure that adequate immunisation facilities were made available for all pre-school children in their Maternity and Child Welfare area and from that time the County Council have contributed 100 per cent. of the cost of immunisation in respect of such children, at the same time continuing their policy of paying 50 per cent. of the cost of local authorities' schemes for school children and also for pre-school children in autonomous maternity and child welfare areas. Furthermore, all health visitors were instructed to give diphtheria immunisation the greatest priority in their work and the County medical staff were required to give the fullest possible co-operation to local sanitary authorities in the furtherance of their schemes. Some slight improvement in the number of immunised children under 5 years of age has, in consequence, become evident but much remains to be done in many districts when it is remembered that the average percentage for the County as a whole is still below 50.

Whilst the fact that to the end of 1946, some 65 per cent. of the child population of the Administrative County had been immunised and the notifications and deaths from diphtheria were the lowest ever recorded, there is still room for improvement and in a considerable number of County districts much remains to be done when it is seen that of the 109 districts, in at least 51 the percentage immunised was lower than the average percentage for the Administrative County as a whole. As regards the children under 5 years of age, 47 districts fell short of the County average for that group, whilst 51 were below the average of the 5-14 group. As stated earlier, however, cognisance has to be taken of the fact that the available records of children immunised do not fully indicate the true position as in a number of districts a considerable amount of immunisation is carried out privately and consequently the number of children so immunised cannot be included.

Table 6, inserted at pages 93 to 97, shows in detail for each County district the state of immunisation of the child population at the end of 1946.

MIDWIFERY, MATERNITY AND CHILD WELFARE

For administrative purposes the County is divided into—

- (a) the Midwifery area of the County Council.
- (b) the Midwifery area of the four local authorities which are autonomous in this respect—Darwen (B), Eccles (B), Leigh (B) and Stretford (B).
- (c) the Maternity and Child Welfare area of the County Council.
- (d) the Maternity and Child Welfare area of the local authorities, autonomous for this purpose.

MIDWIVES ACTS, 1902-36.

The report is not in such detail as in pre-war years, but the main features of the year's work are presented. For purposes of comparison the corresponding figures for 1945 are given.

Midwifery Area.—The County Council is the Local Supervising Authority responsible for the administration of the Midwives Acts in the whole of the Administrative County area, with the exception of the Boroughs of Darwen, Eccles, Leigh and Stretford. The statistics, therefore, exclude these districts.

Midwifery Service.—At the end of the year 1946 the Committee employed 183 whole-time salaried midwives, nearly all of whom worked in urban areas. To cover the rural parts of the Administrative County arrangements existed with 60 Nursing Associations.

There were occasions when it was difficult to meet the statutory obligation to provide an adequate domiciliary service. Sickness largely contributed to this, but temporary difficulty in recruiting staff to fill vacancies was also a factor. The Committee's system of a pool of relief midwives, and relief within an area, helped very much in providing the necessary service.

District Teachers.—The domiciliary midwives approved as District Teachers have continued to work in association with the Jericho and Moorlands Hospitals. They have met at the hospitals to facilitate co-operation in the training of pupils. This combined training has again proved extremely useful in recruiting permanent domiciliary staff.

The work of the District Teachers of Midwifery has been excellent with very good results in the examinations. Each pupil was seen at her work by one of the Supervisors and many of these pupils have been recruited to the County Domiciliary Midwifery Staff.

The County Council have also agreed to provide District Teachers of Midwifery for pupil midwives taking their Part II Course at Sharoe Green Hospital, Fulwood.

Maternity Outfits.—Sterilised maternity outfits are supplied free of cost to all patients attended under the Committee's scheme.

Uniform.—Prior to July, 1946, a cash allowance was made to the Council's Domiciliary Midwives towards the cost of uniform required to be worn in the course of their professional duties.

As from the 1st July, 1946, the County Council decided to provide uniform by direct purchase. Some time previously a circular was received from the Central Midwives Board to the effect that, after consultation with various interested bodies, they had decided to establish a national uniform for midwives. The County Council adopted the national uniform and, in addition, provided a special metal badge indicating the employing authority.

The majority of the Council's Domiciliary Midwives have now been supplied with indoor uniform in accordance with the specifications of the Central Midwives Board, but considerable delay is being experienced in obtaining delivery of the national type greatcoat.

Gas/Air Analgesia.—The number of midwives qualified to administer analgesics is shown below:—

County Council midwives	133
District nurse-midwives	36
Midwives in independent practice	12
Total	181

The training of midwives in gas/air analgesia has continued throughout the year; the majority of the midwives qualified in this form of analgesia have been supplied with Minnitt's gas/air machines.

Inspection and Lectures.—The Supervisors of Midwives have maintained supervision throughout the year. Nursing visits have been made with the midwives to the homes of the patients. These visits have been most useful in encouraging a high standard of technique.

Demonstrations and lectures have been arranged and given to midwives in various parts of the County.

Provision of Motor Cars—County Council Scheme.—Applications approved from County Council midwives to purchase new cars under the above scheme numbered 118. The number of cars obtained was 26.

Housing of County Council Midwives.—In accordance with the policy of purchasing sites and erecting thereon houses for County Council Domiciliary Midwives, the following sites have been approved for acquisition:—

Fletcher Avenue, Clifton, Swinton	.....	.....	.....	2 houses.
Orrell Road, Litherland	.....	.....	.....	”
Milton Street, Royton	.....	.....	.....	1 house.
Grimshaw Lane, Ormskirk	.....	.....	.....	”
Laurel Avenue, Middleton Junction	.....	.....	.....	”
Northern Road, Crosby	.....	.....	.....	”

The Housing Committee of the Borough of Heywood and a firm of Liverpool Estate Agents have made the undermentioned premises available for the housing of County Council Midwives. The premises, the tenancies of which are in the name of the County Council, have been sub-let on service tenancy agreements to midwives at a rental in accordance with the recommendations of the Rushcliffe Committee:—

- 3, Grundy Street, Heywood (house).
5, Crescent Road, Seaforth (flat).

Payment of Doctors' Fees.—Under the Midwives Act, 1918, a medical practitioner called in by a state certified midwife in accordance with the rules of the Central Midwives Board is paid by the Local Supervising Authority. The statement below shows the number of medical aid forms received and the number of claims submitted by medical practitioners:—

Year	No. of medical aid forms received	No. of claims by medical practitioners	Total amount paid
			£ s. d.
1945	4,956	3,786	6,634 9 6
1946	5,516	4,158	7,498 11 0

Roll of Midwives.—The number of state certified midwives on the County register on the 31st December, 1946, was 416. The number at the end of 1945 was 434.

Year	State Certified Midwives		
	Resident in Municipal Boroughs and Urban Districts	Resident in Rural Districts	Resident in areas of other Local Supervising Authorities
1945	299	80	55
1946	290	77	49

Domiciliary Births.—The number of domiciliary births attended by midwives is shown in the following table:—

Description of midwife	Domiciliary births attended					
	Year 1945			Year 1946		
	As midwife	As maternity nurse	Total	As midwife	As maternity nurse	Total
County Council	8,419	1,856	10,275	9,980	2,009	11,989
District Nursing Associations	1,314	638	1,952	1,777	784	2,561
In independent practice	1,266	1,125	2,391	1,182	1,359	2,541
Totals	10,999	3,619	14,618	12,939	4,152	17,091

Medical Aid Forms.—For certain scheduled abnormalities a midwife, acting as a midwife, is obliged to issue a medical aid form calling in a doctor.

Year	Births attended (live and still)	No. of medical aid forms issued
1945	10,999	4,956
1946	12,939	5,516

Stillbirths.—The figures given below refer to domiciliary cases attended by midwives as midwives:—

Year	Births attended (live and still)	No. of stillbirths	Percentage of stillbirths to total births attended
1945	10,999	154	1.40
1946	12,939	176	1.35

MATERNITY AND CHILD WELFARE.

This Report is mainly confined to a statement of the work which has been done. The relevant vital statistics are set out on page 98.

At the end of 1946 the maternity and child welfare work in the Administrative County was carried out by the County Council in 76 County districts, and by autonomous "Welfare Councils" in 33. The table below indicates the relative positions in 1945 and 1946:—

	1945		1946	
	Estimated population	No. of live births	Estimated population	No. of live births
Undertaken by the County Council (76 districts)	939,387	15,640	985,172	17,850
Undertaken by Local Sanitary Authorities (33 districts)	893,033	14,815	939,708	17,614
Totals: Administrative County	1,832,420	30,455	1,924,880	35,464

The following statement shows the live birth-rate, infant mortality rate and maternal mortality rate in the County Maternity and Child Welfare area for each of the years 1939 to 1946:—

	1939	1940	1941	1942	1943	1944	1945	1946
Live birth-rate (per 1,000 esti- mated civilian population).....	14.99	14.71	15.03	16.00	17.30	18.73	16.64	18.11
Infant mortality rate (per 1,000 live births)	56	54	62	51	53	43	48	46
Maternal mortality rate (per 1,000 total live and still births)	4.10	3.88	2.88	2.45	2.56	2.35	2.23	1.73

Health Visiting.—The following statement shows the number of visits made by health visitors to young children and expectant mothers in the years 1945 and 1946:—

(a) Home Visits:—	1945	1946
Infants under 1 year of age:		
No. of first visits	14,745	12,746
No. of re-visits	31,101	26,007
Children 1 to 5 years of age:		
No. of visits	31,376	26,566
(b) Antenatal work:—		
Expectant mothers:		
No. of first visits	2,556	1,961
No. of re-visits	1,430	1,066

Child Welfare Centres.—At the end of 1946 there were 102 child welfare centres maintained by the County Council—an increase of five during the year.

	1945	1946
No. of child welfare centres open at end of year	97	102
No. of sessions during the year	4,459	4,756
No. of attendances by children:		
Under 1 year of age	162,148	169,344
1 to 2 years of age	38,502	36,662
2 to 5 years of age	23,249	23,533
No. of individual expectant mothers who attended	1,155	1,153
No. of attendances by expectant mothers	3,466	3,927

Antenatal Clinics.—At the end of 1946 there were 29 antenatal clinics which had been established by the County Council. In 1945 the number was 28.

Arrangements have also been made under which County patients may attend antenatal clinics established by other authorities or hospitals.

The attendance figures are set out in the following table:—

	No. of clinics		No. of individual women attending		No. of attendances	
	1945	1946	1945	1946	1945	1946
County Council antenatal clinics	28	29	4,729	6,378	16,617	23,383
Antenatal clinics of other authorities and hospitals	7	9	832	1,090	4,009	4,488
Antenatal clinics at County Hospitals and public assistance institutions	5	6	1,391	2,545	6,882	13,302
Totals	40	44	6,952	10,013	27,508	41,173

Admissions to Hospital.—The County Council have arrangements with 45 hospitals, including seven County hospitals, for the reception of patients who show some obstetric abnormality or whose home environment is unsuitable for confinement. During the year 1946, 2,112 patients were admitted under the arrangements. This figure refers only to the type of patient described above, who is the responsibility of the Midwives, Maternity and Child Welfare Committee. There were, in fact, 6,751 additional maternity patients admitted to the County Council's hospitals and institutions during the year 1946. Considerable difficulty was experienced in securing the admission of patients during the year.

***Puerperal Pyrexia.**—By the terms of the Puerperal Pyrexia Regulations, 1939, "any febrile conditions" within certain limits, must be notified. The term, therefore, includes such conditions as the common cold, providing the temperature is within the prescribed limits.

During the year 1946 the number of notifications of cases of puerperal pyrexia was 161. These notifications are analysed below:—

Cases attended at childbirth solely by midwives	33
Cases in which midwives acted as nurses under the supervision of medical practitioners	23
Cases attended by medical practitioners, no midwives being in attendance	12
Cases occurring in institutions	93
Total	161

***Ophthalmia Neonatorum.**—During the year 1946 there were 68 notified cases of ophthalmia neonatorum. In no case did blindness result.

In fact, in the County Council Midwifery area there has been no case of blindness from this cause since 1936.

Illegitimate Children.—Arrangements for the supervision and care of the illegitimate child have been made by the County Council in close co-operation with the Voluntary Associations for Moral Welfare. Through the associations, provision has been made for the care of mothers during confinement, and for the accommodation of the infant in a nursery until the mother is able to undertake full responsibility for its welfare, or other arrangements, e.g., for its adoption, have been made. The importance of the social problem arising in connection with the illegitimate child has been fully recognised and an Almoner was appointed, whose duty it is to assist in this work, maintaining at the same time the closest contacts with the Moral Welfare Societies concerned.

*NOTE.—The statistics for puerperal pyrexia and ophthalmia neonatorum relate to cases occurring in the County Council Midwifery area, i.e., the whole Administrative County with the exception of the Municipal Boroughs of Darwen, Eccles, Leigh and Stretford.

Nurseries.—At the end of 1946 the County Council administered 28 nurseries, including three which provide night accommodation.

The local voluntary committees, established to undertake the management of the nurseries locally, continue to do useful work, particularly in the matter of staffing.

Medical supervision of the nurseries is maintained by the Assistant County Medical Officers.

The 28 nurseries had accommodation for 1,365 children by day and 48 children by night.

The following statement shows the percentage of the total accommodation provided, represented by (a) the average day attendances (Mondays to Fridays) and (b) the number of children on roll during each month of the year 1946, together with more recent figures, i.e., May, 1947:—

Month	Percentage of day accommodation provided, represented by	
	Average day attendances	Number of children on roll
1946 (33 Nurseries)		
January.....	55.5	85.0
February.....	58.5	80.7
March.....	60.6	70.1
(28 Nurseries)		
April.....	66.0	86.0
May.....	70.3	87.0
June.....	69.7	93.0
July.....	68.8	95.0
August.....	69.1	95.0
September.....	74.8	96.3
October.....	78.3	97.4
November.....	72.5	98.7
December.....	63.3	94.3
May, 1947..... (27 Nurseries)	77.8	100.0

The number of mothers released for employment and the staff engaged in the nurseries at the end of December, 1946, and the end of May, 1947, are as follow:—

	December, 1946 (28 Nurseries)	May, 1947 (27 Nurseries)
No. of mothers released for employment—		
Full-time.....	1,102	1,124
Part-time.....	52	35
Total.....	1,154	1,159
Staff engaged in the nurseries— (Equivalent of full-time personnel).....	327	334

From the 1st April, 1946, the Ministry of Health grant was reduced from 100 per cent. to approximately 56.4 per cent. of net expenditure.

Care of Premature Infants.—Midwives and others have been requested to submit details of infants who are born prematurely.

The term “premature” in the ordinary sense applies to every infant born before full term, i.e., before the 280th day following conception. There are obvious reasons why it is preferable to adopt the alternative criterion of foetal nutrition, and the International Committee of the League of Nations recommended that each infant whose birth weight is 5½ lbs. or less should be regarded as premature. This criterion is the one adopted in this country. In Lancashire a special note is endorsed on the Notification of Birth cards, returnable to the County Medical Officer’s Department, of all infants whose birth weight is 5½ lbs. or less.

During the year 1946, 703 infants were born prematurely to mothers normally resident in the welfare area of the County Council.

Of these children 217 were born at home and 486 in hospitals or maternity homes.

The following statement shows the survival rates of children in each case:—

	Born at home	Born in hospital or maternity home
(a) Total births	217	486
(b) Died within 24 hours	32	41
(c) Percentage of infants surviving 24 hours.....	85·2	91·5
(d) Died within 7 days	46	64
(figures include (b))		
(e) Survived 1 month	152	393
(f) Survived 3 months	152	393
(g) Percentage of children surviving at 3 months	70·0	80·8

Most of the deaths in the neonatal period are attributable to such conditions as congenital malformations, congenital defects, congenital debility and wasting diseases. It is clear that the causes of mortality in this period are different from the causes of mortality in later months, and it is also apparent that they are less amenable to those influences which have led to the well-marked reduction in the infantile mortality rate as a whole during the present century.

Attention continues to be devoted to the care of the premature child. Special equipment, including jackets for infants, hot-water bottles, special feeding bottles and thermometers, has been issued to midwives in the welfare area of the County Council, so that it is readily available for use in cases of premature birth. Hospital accommodation is available for those infants born at home for whom institutional treatment is desirable.

The attention of midwives and health visitors has been drawn to the importance of special measures in the home—as, for example, the desirability of a separate bedroom for the mother and infant—and they are also encouraged to attend special courses of instruction on the care of the premature child.

No doubt when the training of doctors as paediatricians is resumed, it will be possible to appoint paediatric specialists to the hospitals, who will also be available for consultative work in the field, a step which the Minister's Advisory Committee on the Welfare of Mothers and Young Children have strongly advocated.

Relevant Vital Statistics.—In Table 7, page 98, are set out the vital statistics for the year 1946 for each of the four divisions of the County for midwifery and maternity and child welfare purposes and, as a comparison, the figures for 1945 are also given.

BLIND PERSONS ACTS, 1920 AND 1938

These Acts empower County Councils and County Borough Councils, whether in combination with any other Council or Councils or otherwise, to make arrangements for promoting the welfare of blind persons ordinarily resident within their area, and such Councils may, for this purpose, provide and maintain or contribute towards the provision and maintenance of workshops, hostels, homes or other places for the reception of blind persons.

Clause 2 of the Blind Persons Act, 1938, provides that all assistance given to blind persons by local authorities (other than institutional or medical assistance) must be given under the Blind Persons Act and not by way of poor relief. The clause also requires that local authorities, in giving financial assistance to blind persons, shall take into account the needs of any members of his household who are dependent on him.

The Public Health and Housing Committee of the County Council are responsible for the administration of the Acts.

The expenses incurred by the County Council under the Blind Persons Acts, 1920 and 1938, are defrayed out of the County fund as expenses for general purposes.

The Education Committee, acting through the School Medical Sub-Committee, are charged with the duty of educating and training the blind, and the Public Health and Housing Committee are charged largely with the duty of providing employment for the employable blind and providing financial assistance for the unemployable blind, together with a number of varied activities which may be summed up under the general heading of "Social Work". It would, perhaps, appear that this division of duties causes a certain lack of co-ordination in dealing with the blind, but as the officials of the Public Health Committee and the School Medical Sub-Committee are the same, there is unity of purpose and complete co-ordination in execution.

The main effort of the County Council is directed towards:—

- (a) Providing treatment, either at hospital or otherwise, for persons where there is danger of permanent blindness if efficient treatment is not promptly undertaken.
- (b) The education and training of blind children and adults.
- (c) The provision of employment for those who are employable.
- (d) The provision of financial or other assistance to unemployable and necessitous blind persons and their sighted dependants.
- (e) The provision of home teaching and the social welfare of the blind.

The scheme is worked through the following Workshops and Societies for the Blind, and as far as possible co-operation is arranged with other local authorities under the Act:—

Accrington and District Institution for the Blind.
 Ashton-under-Lyne and District Society for the Blind.
 Barrow, Furness and Westmorland Society for the Blind.
 Blackburn Workshops for the Blind.
 Blackburn and Darwen Society for Visiting and Instructing the Blind.
 Blackpool and Fylde Society for the Blind.
 Bolton Workshops for the Blind.
 Burnley and District Home Teaching Society for the Blind.
 Burnley Workshops for the Blind.
 Colne and District Society for the Blind.
 Fulwood Workshops and Homes for the Blind, Preston.
 Heywood and Whitefield Blind Welfare Society.
 Liverpool, Cornwallis Street, Workshops for the Blind.
 Liverpool Catholic Blind Asylum.
 Liverpool, Hardman Street, Workshops for the Blind.
 Manchester and Salford Blind Aid Society.
 Manchester, Henshaw's Institution for the Blind.
 Oldham (Men's Workshops).
 Oldham (Blind Women's Industries).
 Oldham Blind Persons Act Sub-Committee.
 Rochdale and District Blind Welfare Society.
 Rossendale Society for the Blind.
 St. Helens and District Society for the Welfare of the Blind.
 Warrington, Widnes and District Society for the Blind.
 Wigan, Leigh and District Workshops for the Blind.
 National Library for the Blind (Northern Branch, Manchester).

The above Institutions, Workshops and Societies for the Blind are controlled by Voluntary Committees with the following exceptions:—

Blackburn Workshops for the Blind.
 Bolton Workshops for the Blind.
 Burnley Workshops for the Blind.

REGISTRATION OF BLIND PERSONS.

The County Council maintain such a system of registration of blind persons as gives them all the necessary information for the administration of these Acts. No person's name is included on the register of blind persons maintained by the County Council unless he is certified to be blind within the meaning of the Acts by one of the Assistant County Medical Officers or Ophthalmic Surgeons with whom the County Council have made special arrangements.

The form of certificate which is completed on behalf of the County Council when alleged blind persons are examined is the same as the one recommended by the Ministry of Health and the Ministry of Education.

The following table shows the number of blind persons in the Administrative County area distributed according to age groups for the years 1945 and 1946:—

Year	0—	5—	16—	21—	40—	60—	Total
1945	13	47	53	350	1,002	2,308	3,773
1946	11	57	51	389	906	2,445	3,859

TRAINING OF YOUNG PERSONS AND ADULTS.

Before selecting the occupation in which a blind person should be trained, the capability of the individual is considered, and also the prospect of employment being found for him in that occupation in the locality in which he lives. The future employing agency is notified from time to time of the progress each blind person is making, and in the last few months of training definite arrangements are made for the blind person to report at the workshop or society for the blind, nearest to his home, for employment as a workshop employee or home worker.

EMPLOYMENT IN WORKSHOPS.

When a blind person completes his training and there is a workshop for the blind within reasonable distance from his home, arrangements are made for his employment there. The occupations carried on at the workshops for the blind are as follow:—

Round machine knitting.	Brush making.
Flat machine knitting.	Skip making.
Furniture making.	Chair caning.
Mat making.	Rush seating.
Basket making.	

At the 13 Workshops for the Blind in Lancashire, the County Council pay grant in respect of blind workshop employees at the same rate as the County Borough Council having blind workshop employees at the same workshop for the blind.

The following table shows the number of blind persons employed and the number in receipt of domiciliary assistance:—

	1945	1946
Employed in Workshops for the Blind	154	169
Employed as "Home Workers"	55	58
In receipt of domiciliary assistance	2,583	2,478
Sighted dependants of blind persons in receipt of domiciliary assistance	672	587

HOMES FOR THE AGED BLIND.

Accommodation is provided in Homes for the Blind for suitable adult blind persons who are aged or infirm or incapable of work and are in need of such accommodation. The blind person usually contributes 21s. a week out of his old age pension of 26s. a week and the balance of the maintenance fee is paid by the County Council.

The following statement shows the Homes and the number of blind persons from the Administrative County area resident there:—

Sunbeam Home of Rest, Blackpool	4
Home for Blind Men, Rhyl	7
Mary Ann Scott Home, Macclesfield	7
Oaklands Home, Pendleton	14
Northern Counties Homes	8
National Institute Homes	2
	42

HOME TEACHERS OF THE BLIND.

The County Council employ 40 Home Teachers of the Blind who are employed wholly in visiting blind persons resident in the Administrative County area.

PROVISION OF DENTAL TREATMENT, SPECTACLES AND SURGICAL APPLIANCES.

The County Council pay the cost of dental treatment, spectacles and surgical appliances for necessitous blind persons in all cases where the expenditure has in the first instance been approved by the County Medical Officer.

PERMANENT MEDICAL RELIEF LIST.

Blind persons who are in receipt of domiciliary assistance have their own and their sighted dependants' names included on the Permanent Medical Relief List whereby they receive the services of the District Medical Officer free of charge.

DISABLED PERSONS (EMPLOYMENT) ACT, 1944.

Welfare of the Blind.

Under the Disabled Persons (Employment) Act, 1944, the Minister of Labour and National Service has certain responsibilities towards all persons registered as disabled persons. Section 15 of the Act provides for the employment "under special conditions" of registered persons who are severely disabled; sub-section 5b empowers the Minister to make payments to Undertakings in respect of expenses incurred by them in providing facilities to enable severely disabled persons to be employed under special conditions; and sub-section 5c empowers the Minister to make payments to any local authority which in fulfilment of statutory obligations is providing facilities to enable severely disabled persons to undertake work under special conditions. Section 17 empowers the Minister to establish both national and local machinery to advise and assist him in carrying out the provisions of the Act.

It has been agreed between Ministers that the Minister of Labour and National Service will exercise his powers under the Disabled Persons (Employment) Act, 1944, in relation to blind persons. The proposals of the Minister are designed to enable him to exercise these powers in such a way as to secure full co-operation between Local Authorities, Voluntary Undertakings and the Ministry of Labour and National Service. In particular the employer/worker relationship that now exists in the blind workshops will not be disturbed; and no change will be made in the present arrangements in the management of these workshops; that is to say, in a municipally owned workshop for the blind, management will continue to rest with the local authority and in a voluntary workshop acting on behalf of one or more local authorities, management will continue to rest with the existing Management Committee.

CIVIL NURSING RESERVE

Civil Nursing Reserve Register.—On the 31st December, 1946, there were 213 names on the Lancashire Register as follows:—

	Trained nurses	Assistant nurses	Nursing auxiliaries	Total
Mobile	12	35	29	76
Immobile—Full-time	25	33	39	97
Total—Full-time	37	68	68	173
Immobile—Part-time	3	11	26	40
Total on Register	40	79	94	213

No. employed in Lancashire County Council hospitals	140
„ „ „ other hospitals.....	23
„ „ „ nurseries	21
No. temporarily unemployed	29

Resignations, Withdrawals and Enrolments in 1946.

Resignations	Withdrawals	Enrolments			
		Trained nurses	Assistant nurses	Nursing auxiliaries	Total
338	48	9	6	23	38

Of the 338 resignations, approximately 25 were of members who resigned in order to take general training, whilst approximately 20 of the withdrawals were of members joining County hospital and institution staffs.

INTENSIVE COURSES.

Six small Courses were arranged during the year with the following results:—

No. of candidates who reported	14
No. who passed	12
No. who failed	2

Applications to the General Nursing Council for admission to the Roll of Assistant Nurses have been numerous and the results very satisfactory, 50 applicants being accepted during the year.

TABLES, ETC.

ADMINISTRATIVE COUNTY OF LANCASTER. INFANT MORTALITY, 1889-1946.

ADMINISTRATIVE COUNTY — ENGLAND & WALES - - - -

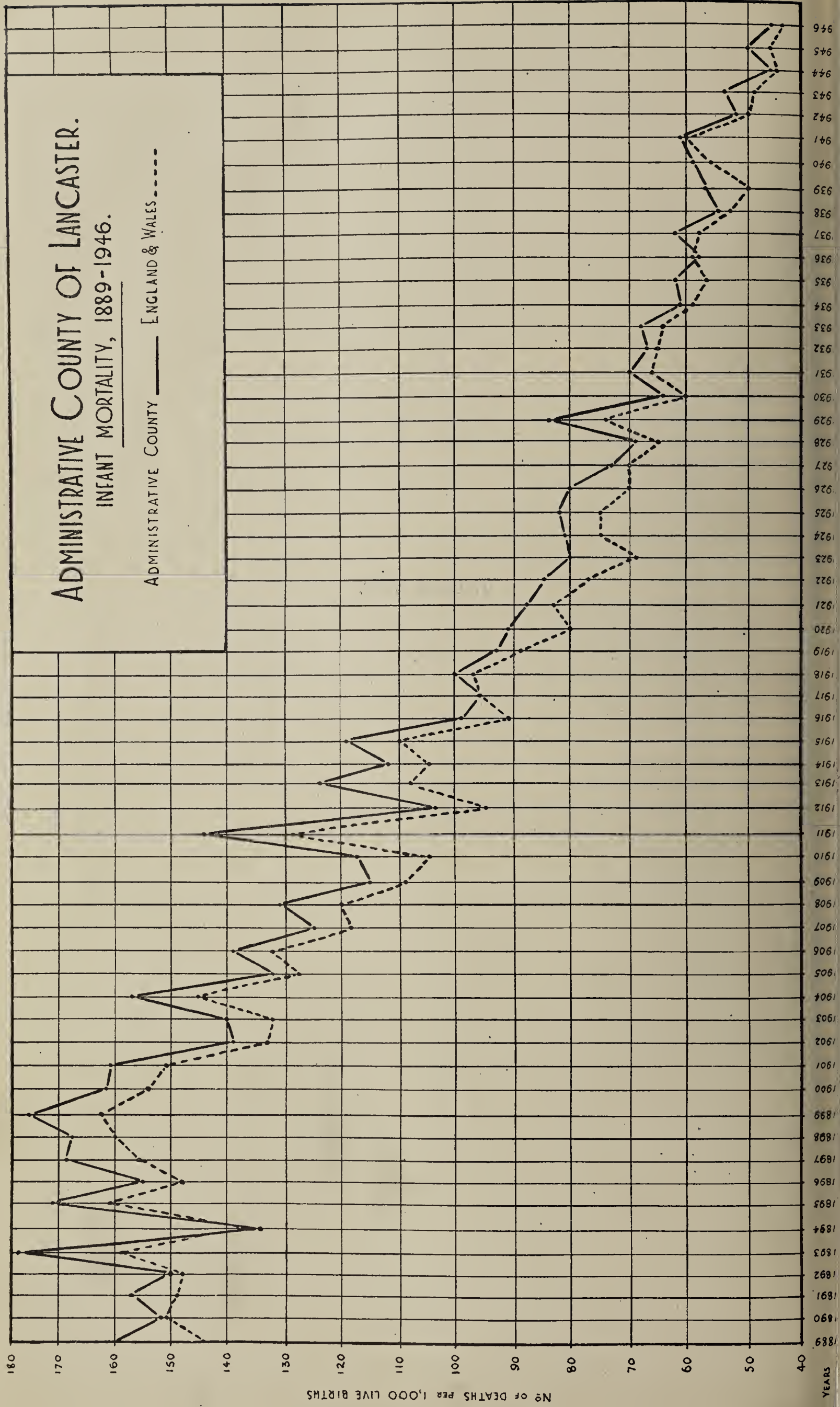


TABLE 1.—COUNTY BIRTH AND DEATH RATES FOR YEARS 1889-1946.

YEAR	LIVE BIRTH-RATE per 1,000 population			CRUDE DEATH-RATE per 1,000 population			INFANT MORTALITY per 1,000 live births		
	County	Urban Districts	Rural Districts	County	Urban Districts	Rural Districts	County	Urban Districts	Rural Districts
1889	30.5	31.8	29.6	17.5	18.4	16.6	160	161	125
1890	29.3	29.7	28.1	18.5	18.9	16.6	152	158	126
1891	31.93	32.45	29.48	21.09	21.70	18.19	157	160	139
1892	30.70	31.11	28.01	19.00	19.34	17.31	150	155	124
1893	30.95	31.35	28.94	19.97	20.37	17.94	177	183	145
1894	29.19	29.49	27.70	16.16	16.42	14.87	134	138	109
Average 6 years, 1889-1894	30.42	30.98	28.63	18.70	19.18	16.91	155	159	128
1895	29.82	30.23	27.57	19.16	19.63	16.57	171	178	127
1896	28.73	29.11	26.62	17.38	17.76	15.25	155	161	121
1897	28.45	28.65	27.29	17.48	17.82	15.55	169	174	138
1898	27.62	27.89	25.80	16.58	16.80	15.09	168	173	130
1899	27.09	27.31	25.53	17.60	17.88	15.65	175	181	134
Average 5 years, 1895-1899	28.34	28.63	26.56	17.64	17.97	15.62	167	173	130
1900	26.80	26.96	25.72	17.19	17.46	15.26	162	167	123
1901	26.57	26.78	25.13	16.28	16.58	14.21	161	167	118
1902	26.85	26.95	26.14	15.26	15.43	14.08	139	143	116
1903	26.77	27.04	24.96	15.22	15.44	13.69	140	143	114
1904	25.56	25.66	24.90	15.54	15.78	13.81	157	162	124
Average 5 years, 1900-1904	26.51	26.67	25.37	15.89	16.13	14.21	151	156	119
1905	25.06	25.22	23.99	14.32	14.52	12.99	132	137	101
1906	24.99	25.11	24.22	14.62	14.81	13.33	139	143	109
1907	24.23	24.47	22.60	14.40	14.59	13.11	125	129	96
1908	24.86	25.05	23.60	14.45	14.61	13.31	131	136	97
1909	23.57	23.67	22.91	13.96	14.08	13.11	115	119	87
Average 5 years, 1905-1909	24.54	24.70	23.46	14.35	14.52	13.17	128	132	98
1910	22.48	22.47	22.52	12.73	12.83	12.09	117	121	93
1911	22.64	22.88	21.15	15.05	15.33	13.25	144	148	111
1912	22.00	22.09	21.42	13.61	13.76	12.60	104	106	89
1913	22.20	22.41	20.86	14.20	14.39	13.00	124	128	100
1914	22.02	22.19	20.95	13.95	14.17	12.53	112	115	96
Average 5 years, 1910-1914	22.26	22.40	21.38	13.90	14.09	12.69	120	123	97
1915	19.78	19.91	18.95	15.32	15.60	13.57	119	123	94
1916	18.54	18.54	18.59	14.31	14.47	13.32	99	101	82
1917	16.25	16.27	16.08	13.98	14.05	13.56	96	96	94
1918	16.08	16.09	16.06	17.26	17.40	16.41	100	101	90
1919	16.62	16.58	16.88	14.06	14.01	14.40	93	94	88
Average 5 years, 1915-1919	17.45	17.47	17.31	14.98	15.10	14.25	101	103	89
1920	22.97	22.30	22.98	12.74	12.83	12.19	91	95	67
1921	20.76	21.06	18.94	12.27	12.31	11.97	88	90	76
1922	18.11	18.28	17.04	13.23	13.43	11.99	85	87	75
1923	17.29	17.42	16.48	12.30	12.44	11.45	80	82	67
1924	16.54	16.62	16.05	12.53	12.66	11.77	81	84	68
Average 5 years, 1920-1924	19.13	19.13	18.29	12.61	12.73	11.87	85	87	70
1925	15.89	15.99	15.23	12.66	12.79	11.86	82	83	71
1926	15.61	15.66	15.29	11.99	12.21	10.69	80	82	71
1927	14.57	14.59	14.48	12.72	12.86	11.94	73	74	68
1928	14.56	14.64	14.08	11.91	12.08	10.95	69	71	57
1929	14.09	14.08	14.20	14.00	14.32	12.12	84	87	64
Average 5 years, 1925-1929	14.94	14.99	14.65	12.65	12.85	11.51	77	79	66
1930	14.01	14.07	13.66	11.87	12.10	10.56	64	64	58
1931	13.85	13.90	13.51	12.86	13.05	11.73	70	72	63
1932	13.44	13.50	13.12	12.29	12.50	11.09	67	68	65
1933	12.89	12.92	12.70	13.09	13.26	12.09	68	70	61
1934	13.34	13.38	13.07	12.08	12.21	11.15	61	61	59
Average 5 years, 1930-1934	13.50	13.55	13.21	12.43	12.62	11.32	66	67	61
1935	13.31	13.30	13.34	12.62	12.78	11.54	62	62	57
1936	13.63	13.62	13.71	12.85	13.09	11.21	58	59	47
1937	13.81	13.78	14.05	13.29	13.47	12.14	62	64	51
1938	14.14	14.03	14.86	12.29	12.48	11.08	55	55	53
1939	14.25	14.11	15.12	13.04	13.33	11.20	57	57	52
Average 5 years, 1935-1939	13.82	13.76	14.21	12.81	13.03	11.43	58	59	52
1940	14.44	14.37	14.87	14.34	14.78	11.63	59	60	50
1941	14.73	14.76	14.55	13.06	13.40	11.03	61	62	51
1942	15.97	16.07	15.42	12.31	12.59	10.68	52	54	44
1943	17.32	17.38	16.98	13.26	13.51	11.79	54	55	47
1944	18.64	18.65	18.61	12.84	13.02	11.64	46	47	41
Average 5 years, 1940-1944	16.22	16.24	16.08	13.16	13.46	11.35	54	55	46
1945	16.62	16.63	16.50	13.12	13.39	11.45	50	51	43
1946	18.42	18.63	17.09	12.61	12.82	11.32	46	46	48

TABLE 2—continued.

URBAN DISTRICTS.	Area in statute acres at 31st Dec. 1946.	POPULATION AT ALL AGES.		BIRTHS.				DEATHS.				INFANT MORTALITY					MATERNAL MORTALITY.		CANCER.	PULMONARY TUBERCULIS.								
		Census, 1931.	Est. Mean Civilian, 1946.	L.—Legitimate.		I.—Illegitimate.		Number registered.		Crude death-rate per 1,000 population.	Deaths of infants under one year.				Per 1,000 <i>live</i> births.	Per 1,000 <i>total</i> (live and still) births.												
				LIVE BIRTHS.		STILLBIRTHS.		F.			L.—Legitimate.		I.—Illegitimate.															
				Number registered.		Live birth-rate per 1,000 popul'n.	Number registered.		Total No. of still-births.		M.	F.	Total leg. and illeg.	Rate per 1,000 live births.														
				M.	F.		Both sexes.	Total No. of live births.									M.	F.			Both sexes.	Leg. Illeg Total.						
Church	528	6,187	4,992	L. 29 I. 2	38 3	67 5	72	14.4	L. 2 I. —	— 1	2 1	3	40	35	33	68	13.6	L. 3 I. —	5 —	8 —	8	119	nil	111	nil	nil	2.40	1.00
Clayton-le-Moors	1,060	7,909	6,607	L. 69 I. 3	51 2	120 5	125	18.9	L. 4 I. —	4 —	8 —	8	60	54	47	101	15.2	L. 5 I. —	1 —	6 —	6	50	nil	48	nil	nil	2.42	0.30
Clitheroe (B)	2,386	12,008	10,940	L. 84 I. 3	88 3	172 6	178	16.2	L. 4 I. 2	2 1	6 3	9	48	82	77	159	14.5	L. 2 I. —	1 —	3 —	3	17	nil	16	nil	nil	2.10	0.36
Colne (B)	5,939	23,918	20,140	L. 172 I. 13	175 11	347 24	371	18.4	L. 3 I. 1	2 1	5 2	7	18	144	149	293	14.5	L. 3 I. 1	10 —	13 1	14	37	41	37	nil	nil	2.33	0.34
Crompton	2,865	14,764	12,420	L. 114 I. 2	108 5	222 7	229	18.4	L. 4 I. —	4 —	8 —	8	33	80	82	162	13.0	L. 7 I. —	5 —	12 —	12	54	nil	52	nil	nil	1.61	0.32
Crosby (B)	4,772	50,569	57,540	L. 535 I. 31	478 19	1,013 50	1,063	18.4	L. 13 I. 2	6 1	19 3	22	20	379	391	770	13.3	L. 30 I. 3	21 3	51 6	57	50	120	53	nil	nil	1.98	0.81
Dalton-in-Furness	8,022	10,489	10,550	L. 85 I. 9	87 5	172 14	186	17.6	L. 2 I. —	1 1	3 1	4	21	73	80	153	14.5	L. 6 I. —	1 —	7 —	7	40	nil	37	nil	nil	1.70	0.85
Darwen (B)	5,959	36,012	29,880	L. 246 I. 19	219 11	465 30	495	16.5	L. 4 I. —	7 —	11 —	11	21	253	243	496	16.6	L. 12 I. —	4 1	16 1	17	34	33	34	2.02	1.97	2.44	0.23
Denton	2,593	17,384	24,030	L. 233 I. 18	201 10	434 28	462	19.2	L. 8 I. —	9 —	17 —	17	35	123	170	293	12.1	L. 11 I. 1	7 —	18 1	19	41	35	41	nil	nil	1.83	0.20
Droylsden	1,010	13,340	24,800	L. 265 I. 9	252 9	517 18	535	21.5	L. 9 I. 3	6 —	15 3	18	32	124	126	250	10.0	L. 12 I. —	8 1	20 1	21	38	55	39	1.86	1.80	1.61	0.52
Eccles (B)	3,417	44,838	41,270	L. 406 I. 25	362 19	768 44	812	19.6	L. 14 I. 1	10 —	24 1	25	29	271	264	535	12.9	L. 20 I. 4	11 2	31 6	37	40	136	45	nil	nil	1.91	0.55
Fallsworth	1,073	15,712	17,270	L. 163 I. 6	164 11	327 17	344	19.9	L. 3 I. —	1 —	4 —	4	11	112	94	206	11.9	L. 4 I. —	4 1	8 1	9	24	58	26	nil	nil	1.56	0.57
Farnworth (B)	1,504	28,717	27,070	L. 392 I. 10	198 16	500 26	526	19.4	L. 13 I. 1	6 2	19 3	22	40	163	174	337	12.4	L. 14 I. 1	7 —	21 1	22	42	38	41	5.70	5.47	2.06	0.33
Fleetwood (B)	2,565	23,001	24,960	L. 240 I. 21	244 18	484 39	523	20.9	L. 6 I. 1	7 1	13 2	15	27	137	133	270	10.8	L. 11 I. 1	9 2	20 3	23	41	76	43	1.91	1.85	1.36	0.40
Formby	5,613	7,965	8,864	L. 95 I. 7	73 1	168 8	176	19.8	L. 4 I. —	1 —	5 —	5	27	65	76	141	15.9	L. 1 I. 1	4 —	5 1	6	29	125	34	nil	nil	2.48	0.45
Fulwood	3,273	8,816	11,680	L. 80 I. 7	66 4	146 11	157	13.4	L. 5 I. —	— —	5 —	5	30	93	98	191	16.3	L. 7 I. 2	1 —	8 2	10	54	181	63	nil	nil	2.39	0.42

TABLE 2—continued.

URBAN DISTRICTS.	Area in statute acres at 31st Dec. 1946.	POPULATION AT ALL AGES.		BIRTHS.				I.—Illegitimate.				DEATHS.			INFANT MORTALITY						MATERNAL MORTALITY.		CANCER.	PULMONARY TUBERCULOSIS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
				L.—Legitimate.		LIVE BIRTHS.		STILLBIRTHS.		Number registered.			I.—Illegitimate.			Deaths of infants under one year.			Per 1,000 <i>live</i> births.	Per 1,000 <i>total</i> (live and still) births.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Census, 1931.	Est. Mean Civilian, 1946.	Number registered.			Live birth-rate per 1,000 popu'l'n.	Number registered.			Total No. of still-births.	Crude death-rate per 1,000 population.	M.	F.	Total No. of deaths.	M.	F.	Both sexes.			Total leg. and illeg.	Rate per 1,000 live births.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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TABLE 2—continued.

URBAN DISTRICTS.	Area in statute acres at 31st Dec. 1946.	POPULATION AT ALL AGES.		BIRTHS.				DEATHS.				INFANT MORTALITY						MATERNAL MORTALITY.		CANCER.	PULMONARY TUBERCULIS.										
				L.—Legitimate.		I.—Illegitimate.		STILLBIRTHS.		Number registered.		Crude death-rate per 1,000 population.	Deaths of infants under one year.						Per 1,000 <i>total</i> (live and still) births.												
				LIVE BIRTHS.				Number registered.					L.—Legitimate.									Per 1,000 <i>live</i> births.									
				Number registered.		Live birth-rate per 1,000 popul'n.	Number registered.		Rate per 1,000 live births.																						
				M.	F.		Both sexes.	Total No. of live births.	M.	F.	Both sexes.		Total No. of stillbirths.	M.	F.	Both sexes.	Total leg. and illeg.	Leg. Illeg. Total.													
Leyland	3,804	10,573	14,250	L. 123 I. 8	129 6	252 14	266	18.6	L. 3 I. 1	3	—	6	—	6	22	84	74	158	L. 11.0 I. 1	4	—	8	1	9	31	71	33	3.75	3.67	1.54	0.28
Litherland	818	15,959	19,490	L. 206 I. 14	225 8	431 22	453	23.2	L. 13 I. 1	4	—	17	1	18	38	124	108	232	11.9	12	1	30	1	31	69	45	68	2.20	2.12	1.43	0.76
Littleborough	7,855	12,028	10,230	L. 89 I. 7	104 5	193 12	205	20.0	L. 1 I. 1	4	1	5	1	6	28	80	78	158	15.4	4	2	6	2	8	31	166	39	9.75	9.47	2.54	nil
Little Lever	808	4,944	4,541	L. 39 I. 2	36 2	75 4	79	17.3	L. 3 I. 1	3	—	6	—	6	70	42	32	74	16.2	1	4	5	1	6	66	250	75	nil	nil	1.76	0.22
Longridge	3,285	4,158	3,916	L. 40 I. 6	40 3	80 9	89	22.7	L. 1 I. 1	3	—	4	—	4	43	21	31	52	13.2	—	—	—	—	—	nil	nil	nil	nil	nil	2.29	0.51
Lytham St. Annes (B)	5,802	25,764	30,490	L. 176 I. 9	166 11	342 20	362	11.8	L. 7 I. 3	4	—	11	3	14	37	196	296	492	16.1	7	3	10	1	11	29	50	30	nil	nil	2.45	0.32
Middleton (B)	5,172	29,183	30,160	L. 290 I. 21	240 19	530 40	570	18.8	L. 9 I. 2	6	1	15	3	18	30	176	183	359	11.9	14	1	25	3	23	47	75	49	1.75	1.70	2.08	0.56
Milnrow	5,194	8,623	8,134	L. 68 I. 3	72 4	140 7	147	18.0	L. 1 I. 1	2	—	3	—	3	20	56	49	105	12.9	2	3	5	1	6	35	142	40	nil	nil	2.08	0.24
Morecambe and Heysham (B)	3,794	24,542	37,300	L. 241 I. 25	239 15	480 40	520	13.9	L. 6 I. 1	9	1	15	2	17	31	278	292	570	15.2	14	10	24	1	25	50	25	48	nil	nil	2.09	0.26
Mossley (B)	3,624	12,042	10,250	L. 107 I. 2	84 6	191 8	199	19.4	L. 4 I. 1	3	—	7	1	8	38	74	68	142	13.8	4	4	8	—	8	41	nil	40	nil	nil	2.14	0.29
Nelson (B)	3,445	38,277	32,650	L. 251 I. 19	246 15	497 34	531	16.2	L. 10 I. 1	17	—	27	1	28	50	254	240	494	15.1	9	3	12	3	15	24	88	28	nil	nil	2.05	0.36
Newton-le-Willows	3,105	20,152	21,140	L. 187 I. 8	166 8	353 16	369	17.4	L. 9 I. 1	4	—	13	—	13	34	140	101	241	11.4	11	10	21	2	23	59	125	62	nil	nil	1.98	0.28
Ormskirk	15,608	17,118	20,360	L. 158 I. 10	171 17	329 27	356	17.4	L. 2 I. 1	5	—	7	1	8	21	108	108	216	10.6	5	7	12	2	14	36	74	39	nil	nil	1.86	0.29
Orrell	1,617	6,949	8,581	L. 83 I. 1	75 1	158 2	160	18.6	L. 1 I. 1	4	—	5	—	5	30	44	51	95	11.0	4	3	7	—	7	44	nil	43	nil	nil	0.69	0.23
Oswaldtwistle	4,885	14,218	12,090	L. 108 I. 8	103 6	211 14	225	18.6	L. 3 I. 1	3	1	6	1	7	30	94	100	194	16.0	3	6	9	2	11	42	142	48	nil	nil	2.48	0.41
Padiham	975	11,636	9,650	L. 97 I. 3	90 5	187 8	195	20.2	L. 2 I. 1	2	—	4	1	5	25	92	64	156	16.1	8	5	13	—	13	69	nil	66	nil	nil	1.86	0.51

TABLE 2—continued.

URBAN DISTRICTS.	Area in statute acres at 31st Dec. 1946.	POPULATION AT ALL AGES.		BIRTHS.			DEATHS.			INFANT MORTALITY					MATERNAL MORTALITY.		CANCER.	PULMONARY TUBERCULOSIS.						
				L.—Legitimate.		I.—Illegitimate.		Number registered.			Deaths of infants under one year.					Per 1,000 <i>live</i> births.			Per 1,000 <i>total</i> (live and still) births.					
				LIVE BIRTHS.		STILLBIRTHS.		Number registered.			L.—Legitimate.													
				Number registered.		Live birth-rate per 1,000 populi n.		Number registered.			Rate per 1,000 live births.													
				M.	F.	Both sexes.	Total No. of live births.	M.	F.	Both sexes.	Total No. of deaths.	M.	F.	Both sexes.	Total leg. and illeg.					Leg. Illeg.	Total.			
Poulton-le-Fylde	2,408	5,128	7,278	L. 55 I. 4	46 4	101 8	109 }	14.9	L. 1 I. 1	1	2	2	18	47	51	98	13.4	L. 1 I. 1	1	1	9	nil	1.92	0.27
Presall	3,277	2,043	2,071	L. 14 I. 1	15 —	29 1	30 }	14.4	L. 1 I. 1	—	1	1	32	14	13	27	13.0	L. 1 I. 1	1	1	33	nil	0.96	nil
Prescot	870	11,413	11,780	L. 117 I. 5	109 16	226 21	247 }	20.9	L. 7 I. 1	7	14	14	53	67	60	127	10.7	L. 8 I. 3	16	20	80	nil	1.18	0.67
Prestwich (B)	2,421	23,881	34,130	L. 281 I. 10	246 6	527 16	543 }	15.9	L. 9 I. 1	7	16	16	28	182	186	368	10.7	L. 9 I. 1	19	36	34	nil	1.84	0.29
Radcliffe (B)	4,957	27,317	26,840	L. 216 I. 23	235 14	451 37	488 }	18.1	L. 5 I. 1	11	16	16	31	192	163	355	13.2	L. 12 I. 1	19	42	43	nil	2.34	0.11
Rainford	5,877	3,494	3,682	L. 31 I. 2	27 1	58 3	61 }	16.5	L. 1 I. 1	—	1	1	16	30	26	56	15.2	L. 3 I. 1	3	51	49	16.39	2.98	0.54
Ramsbottom	9,562	15,530	13,900	L. 111 I. 7	126 4	237 11	248 }	17.8	L. 2 I. 1	3	5	8	31	100	111	211	15.1	L. 4 I. 2	11	13	52	4.03	2.15	0.50
Rawtenstall (B)	9,528	28,587	24,300	L. 180 I. 11	185 12	365 23	388 }	15.9	L. 14 I. 1	6	20	20	49	168	178	346	14.2	L. 11 I. 1	15	35	38	7.73	2.42	0.45
Rishton	2,879	6,609	5,405	L. 46 I. 1	43 2	89 3	92 }	17.0	L. 1 I. 1	2	2	2	21	42	45	87	16.0	L. 1 I. 1	3	5	54	10.63	1.66	0.74
Royton	2,149	16,689	14,500	L. 132 I. 5	130 7	262 12	274 }	18.8	L. 5 I. 1	1	6	6	21	88	100	188	12.9	L. 7 I. 1	13	41	47	3.64	1.79	0.27
Skelmersdale	1,942	6,177	5,883	L. 69 I. 3	57 3	126 6	132 }	22.4	L. 4 I. 1	5	9	9	63	53	33	86	14.6	L. 6 I. 1	10	79	75	7.57	0.84	0.33
Standish-with-Langtree	3,266	7,261	8,501	L. 75 I. 2	66 2	141 4	145 }	17.0	L. 1 I. 1	2	3	3	26	47	54	101	11.8	L. 1 I. 1	2	14	13	nil	1.52	0.23
Stretford (B)	3,530	56,817	58,630	L. 588 I. 51	537 53	1,145 104	1,249 }	21.3	L. 28 I. 1	23	51	54	41	352	353	705	12.0	L. 25 I. 6	48	57	45	0.80	2.08	0.63
Swinton and Pendlebury (B)	3,363	35,545	39,500	L. 356 I. 14	325 15	681 29	710 }	17.9	L. 9 I. 1	11	20	21	28	228	264	492	12.4	L. 13 I. 2	27	30	42	nil	2.02	0.68
Thornton Cleveleys	3,358	10,292	15,430	L. 125 I. 4	98 7	223 11	234 }	15.1	L. 5 I. 1	4	9	10	40	115	147	262	16.9	L. 5 I. 1	11	44	47	4.27	1.94	0.19
Tottington	2,542	6,532	5,684	L. 63 I. 4	29 3	92 7	99 }	17.4	L. 1 I. 1	—	1	1	10	44	49	93	16.3	L. 3 I. 1	5	54	50	nil	2.11	0.35

TABLE 2—continued.

URBAN DISTRICTS.	Area in statute acres at 31st Dec. 1946.	POPULATION AT ALL AGES.		BIRTHS.		L.—Illegitimate.				DEATHS.			INFANT MORTALITY						MATERNAL MORTALITY.		CANCER.	PULMONARY TUBERCULOSIS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
				L.—Legitimate.		LIVE BIRTHS.		L.—Illegitimate.		STILLBIRTHS.			Number registered.			Deaths of infants under one year.							Per 1,000 <i>live</i> births.	Per 1,000 <i>total</i> (live and still) births.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
				Number registered.		Live birth-rate per 1,000 popu'l'n.		Number registered.		Total No. of still-births.		Total No. of deaths.			Rate per 1,000 live births.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		M.	F.	Both sexes.	Total No. of live births.	M.	F.	Both sexes.	Total No. of still-births.	M.	F.	Both sexes.	Total leg. and illeg.	Leg.	Illeg.	Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Census, 1931.	Est. Mean Civilian, 1946.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		Frawden	6,815	2,549	2,033	L. 15 I. 3	19 1	34 4	38	18.6	L. — I. —	2 —	2 —	50	26	12.7	L. — I. —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —

TABLE 2—continued.

RURAL DISTRICTS.	Area in statute acres at 31st Dec. 1946.	POPULATION AT ALL AGES.		BIRTHS.				I.—Illegitimate.				DEATHS.			INFANT MORTALITY						MATERNAL MORTALITY.		CANCER.	PULMONARY TUBERCULIS.		
				L.—Legitimate.				I.—Illegitimate.				DEATHS.			INFANT MORTALITY						MATERNAL MORTALITY.					
				LIVE BIRTHS.				STILLBIRTHS.				DEATHS.			INFANT MORTALITY						MATERNAL MORTALITY.					
		Census, 1931.	Est. Mean Civilian, 1946.	Number registered.				Number registered.				Number registered.			Deaths of infants under one year.						Per 1,000 <i>live</i> births.	Per 1,000 <i>total</i> (live and still) births.	Death-rate per 1,000 population.			
				M.	F.	Both sexes.	Total No. of live births.	M.	F.	Both sexes.	Total No. of still-births.	M.	F.	Total No. of deaths.	M.	F.	Both sexes.	Total leg. and illeg.	Leg. Illeg. Total.							
Blackburn	19,469	11,186	12,450	L. 75 I. —	77 5	152 5	157	12·6	L. 2 I. 1	2 —	4 —	24	60	71	131	10·5	L. 3 I. 1	2 —	5 —	32 nil	5 —	31	6·36	6·21	2·08	0·24
Burnley	39,849	17,418	16,290	L. 118 I. 7	117 6	235 13	248	15·2	L. 3 I. 1	3 —	6 —	23	116	120	236	14·4	L. 5 I. 1	5 —	10 —	42 nil	10 —	40	4·03	3·93	1·96	0·24
Chorley	41,114	23,709	25,430	L. 234 I. 3	216 10	450 13	463	18·2	L. 4 I. 1	9 —	13 —	27	129	140	269	10·5	L. 9 I. 1	6 2	15 2	33 153	17 —	36	2·15	2·10	1·49	0·19
Clitheroe	32,170	8,644	8,705	L. 53 I. 2	65 —	118 2	120	13·7	L. 2 I. 1	— —	2 —	16	43	37	80	9·1	L. 1 I. 1	1 —	2 —	16 nil	2 —	16	nil	nil	1·60	0·11
Fylde	33,264	9,217	10,490	L. 85 I. 6	76 7	161 13	174	16·5	L. 6 I. 2	1 —	7 2	49	65	69	134	12·7	L. 1 I. 1	3 2	3 3	18 230	6 —	34	nil	nil	1·81	0·38
Garstang	57,491	11,562	11,730	L. 102 I. 2	82 6	184 8	192	16·3	L. 2 I. 1	1 —	3 —	15	82	61	143	12·1	L. 5 I. 1	1 1	6 1	32 125	7 —	36	5·20	5·12	1·79	0·17
Lancaster	53,212	9,437	10,980	L. 88 I. 4	70 4	158 8	164	15·1	L. 1 I. 1	2 —	3 1	23	69	64	133	12·1	L. 2 I. 1	1 —	3 —	18 nil	3 —	18	6·02	5·88	1·27	0·36
Limehurst	3,690	8,156	7,460	L. 48 I. 2	61 1	109 3	112	15·0	L. 1 I. 1	1 —	2 —	17	50	47	97	13·0	L. 3 I. 1	3 —	6 —	55 nil	6 —	53	nil	nil	1·74	0·13
Lunesdale	76,267	6,575	6,655	L. 71 I. 3	53 2	124 5	129	19·3	L. 1 I. 1	2 —	3 —	22	42	39	81	12·1	L. 3 I. 1	— —	3 —	24 nil	3 —	23	nil	nil	1·20	0·15
Preston	50,318	27,626	36,560	L. 286 I. 13	250 10	536 23	559	15·2	L. 6 I. 2	6 —	12 2	24	215	213	428	11·7	L. 9 I. 2	15 1	24 3	44 130	27 —	48	nil	nil	1·80	0·43
Ulverston	127,448	16,569	16,540	L. 148 I. 6	117 5	265 11	276	16·6	L. 9 I. 1	2 —	11 —	38	117	109	226	13·6	L. 5 I. 1	6 —	11 1	41 90	12 —	43	nil	nil	1·87	0·30
Warrington	22,457	14,909	22,890	L. 215 I. 19	208 12	423 31	454	19·8	L. 8 I. 1	8 —	16 —	34	120	102	222	9·6	L. 13 I. 1	16 1	29 2	68 64	31 —	68	4·40	4·25	1·66	0·43
West Lancashire	67,131	24,653	40,230	L. 391 I. 12	350 16	741 28	769	19·1	L. 12 I. 1	11 —	23 1	30	221	231	452	11·2	L. 15 I. 2	19 2	34 4	45 142	38 —	49	3·90	3·78	1·93	0·34
Whiston	29,446	19,812	35,040	L. 300 I. 10	320 19	620 29	649	18·5	L. 6 I. 1	6 1	12 2	21	170	156	326	9·3	L. 29 I. 1	22 1	51 1	82 34	52 —	80	1·54	1·50	0·97	0·42

TABLE 2—continued.

RURAL DISTRICTS.	Area in statute acres at 31st Dec. 1946.	POPULATION AT ALL AGES.		BIRTHS.			I.—Illegitimate.				DEATHS.			INFANT MORTALITY					MATERNAL MORTALITY.		CANCER.	PULMONARY TUBERCULIS.					
				L.—Legitimate.		LIVE BIRTHS.		STILLBIRTHS.		Number registered.		Crude death-rate per 1,000 population.	Deaths of infants under one year. L.—Legitimate. I.—Illegitimate.					Per 1,000 <i>live</i> births.	Per 1,000 <i>total</i> (live and still) births.								
		M.	F.	Both sexes.	Number registered.			Still-birth rate per 1,000 <i>total</i> births.	M.	F.	Total No. of deaths.		M.	F.	Both sexes.	Total leg. and illeg.	Rate per 1,000 live births.										
					M.	F.	Both sexes.					Leg. Illeg. Total.															
Wigan	11,696	6,126	7,510	L. 67 I. 4	58 2	125 6	131	L. 3 I. —	— —	3 —	3	22	52	36	88	11.7	L. 2 I. —	1 —	3 —	3	24	nil	22	7.63	7.46	1.33	0.26
Total Rural Districts ...	665,022	215,599	268,960	L. 2,281 I. 93	2,120 105	4,401 198	4,599	L. 66 I. 7	54 1	120 8	128	27	1,551	1,495	3,046	11.32	L. 104 I. 8	108 2	212 10	222	48	50	48	2.60	2.53	1.64	0.32
Total Urban Districts ...	372,640	1,564,210	1,655,920	L. 15,037 I. 862	14,154 812	29,191 1,674	30,865	L. 498 I. 39	435 37	933 76	1,009	31	10,636	10,603	21,239	12.82	L. 746 I. 75	571 50	1,317 125	1,442	45	74	46	1.29	1.25	1.85	0.40
Total Administrative County	(a) 1,037,662	(b) 1,779,809	(a) 1,924,880	L. 17,318 I. 955	16,274 917	33,592 1,872	35,464	L. 564 I. 46	489 38	1,053 84	1,137	31	12,187	12,098	24,285	12.61	L. 850 I. 83	679 52	1,529 135	1,664	45	72	46	1.46	1.42	1.85	0.39

(a) Area and estimated population of Administrative County as constituted at 31st December, 1946. (b) Census 1931 enumeration of population, adjusted in accordance with boundary alterations.

TABLE 3—CAUSES OF DEATH IN EACH URBAN AND RURAL DISTRICT IN THE YEAR 1946.

URBAN DISTRICTS.	Total No. of deaths from all causes	MORTALITY FROM SUBJOINED CAUSES.																																								
		Typhoid and paratyphoid fevers	Cerebro-spinal fever	Scarlet fever	Whooping cough	Diphtheria	Tuberculosis of respiratory system	Other forms of tuberculosis	Syphilitic diseases	Influenza	Measles	Ac. poliomyelitis and Ac. polio-encephalitis	Ac. infectious encephalitis	Cancer of buccal cavity and oesophagus (males)	Cancer of uterus (females)	Cancer of stomach and duodenum	Cancer of breast	Cancer of all other sites	Diabetes	Intra-cranial vascular lesions	Heart disease	Other diseases of circulatory system	Bronchitis	Pneumonia	Other respiratory diseases	Ulcer of stomach or duodenum	Diarrhoea (under 2 years)	Appendicitis	*Other digestive diseases	Nephritis	Puerperal and post-abortive sepsis	Other maternal causes	Premature birth	Congenital malformations, birth injury, infantile disease	Suicide	Road traffic accidents	Other violent causes	All other causes				
Abram	77	—	—	—	—	—	1	—	—	—	—	—	—	1	2	—	—	6	—	13	12	5	4	5	1	1	2	—	—	1	3	1	—	—	—	—	1	1	—	7	11	
Accrington (B)	617	—	—	—	—	1	17	3	2	4	—	—	4	9	21	14	60	1	75	230	7	33	17	3	3	17	3	4	—	2	12	11	—	—	1	10	10	8	1	18	39	
Adlington	53	—	—	—	—	—	—	3	—	2	—	—	—	—	1	4	3	—	6	20	1	2	1	1	1	1	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	4
Ashton-in-Makerfield	201	—	—	—	1	—	9	1	—	—	—	1	—	1	6	2	20	3	22	57	3	12	6	4	6	6	1	1	—	—	6	2	—	—	—	1	8	—	—	12	23	
Ashton-under-Lyne (B)	657	1	—	—	—	—	22	2	4	11	1	1	—	5	12	13	13	46	2	79	214	19	46	30	9	2	2	2	3	19	14	1	—	—	13	15	1	5	14	38		
Aspull	99	—	—	—	—	—	3	1	1	1	—	2	—	1	1	3	2	6	1	13	20	2	4	4	2	2	1	—	—	—	4	3	—	—	—	1	6	—	—	3	15	
Atherton	222	—	—	—	—	—	2	—	2	9	—	1	—	3	—	6	5	23	1	23	49	6	12	7	8	7	2	2	1	6	5	1	—	—	2	6	2	2	8	30		
Audenshaw	148	—	—	—	—	—	8	1	1	1	—	—	2	—	6	5	17	—	22	50	2	2	3	2	3	2	1	1	—	1	4	1	—	—	1	2	4	—	3	1	10	
Bacup (B)	263	—	—	—	—	—	7	2	1	—	—	—	2	2	7	—	24	2	42	91	7	13	5	6	5	6	2	2	1	4	4	1	—	—	8	8	4	—	7	13		
Barrowford	74	—	—	—	—	—	1	—	—	—	—	—	—	—	1	2	2	9	1	8	20	2	4	1	1	1	1	1	—	1	4	2	—	—	1	4	2	—	—	—	11	
Billinge and Winstanley	67	—	—	—	1	—	1	—	—	3	—	2	—	—	3	1	3	—	9	11	—	—	1	1	1	2	—	—	1	—	—	—	—	—	1	—	1	—	4	21		
Blackrod	46	—	—	—	—	—	—	1	—	—	—	—	—	—	—	2	—	3	—	7	15	1	2	1	1	—	—	—	—	2	1	—	—	—	2	1	—	—	2	3		
Brierfield	113	—	—	—	1	—	—	1	—	6	—	—	1	2	1	4	4	8	1	12	26	9	3	3	3	—	—	—	1	5	3	—	—	—	1	2	1	—	1	—	1	17
Carnforth	37	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	1	1	7	9	3	3	—	—	—	1	1	—	—	1	—	—	—	—	—	—	1	—	—	5		
Chadderton	375	—	1	—	1	1	5	3	2	10	—	—	—	2	15	7	32	5	53	101	6	26	12	6	12	6	1	1	2	10	11	—	—	—	7	7	7	2	11	24		
Chorley (B)	381	—	1	—	1	1	7	2	1	9	—	—	3	5	13	4	33	2	52	82	8	31	17	7	17	7	6	4	1	12	22	—	—	1	9	14	2	4	3	25		
Church	68	—	—	—	—	—	5	—	—	1	—	—	—	—	3	1	8	—	12	17	—	4	1	1	1	1	—	—	—	2	1	—	—	—	—	3	—	—	1	5		
Clayton-le-Moors	101	—	—	—	—	—	2	1	—	1	—	—	1	—	3	2	10	—	7	36	1	7	3	3	2	3	1	1	—	3	1	—	—	—	3	1	2	1	4	9		
Clitheroe (B)	159	—	—	—	—	—	4	1	1	2	—	—	1	1	1	4	2	15	1	20	57	5	5	3	3	—	1	—	—	5	6	—	—	—	1	2	2	1	3	15		
Colne (B)	293	—	—	—	1	—	7	—	—	5	—	—	1	2	1	8	4	32	1	49	67	11	17	7	2	2	7	—	1	11	7	—	—	3	6	2	1	7	33			
Crompton	162	—	—	—	—	—	4	1	—	1	—	—	—	—	—	5	10	2	15	40	7	15	6	1	6	1	—	1	—	4	6	—	—	—	4	3	3	—	5	24		
Crosby (B)	770	—	—	—	3	—	47	7	—	8	1	1	1	3	4	19	9	79	2	82	225	14	51	16	12	12	5	8	2	12	29	—	—	20	16	4	5	19	66			
Dalton-in-Furness	153	—	—	—	—	—	9	1	—	7	—	—	2	1	4	—	11	3	20	52	2	8	7	7	—	—	—	1	1	2	1	—	—	6	—	—	—	3	12			
Darwen (B)	496	—	1	—	—	—	7	4	—	5	—	—	5	5	13	7	43	2	78	136	23	39	16	4	4	3	2	2	2	21	18	—	—	1	6	4	5	2	12	32		

TABLE 3—continued.

MORTALITY FROM SUBORNED CAUSES.

URBAN DISTRICTS.	Total No. of deaths from all causes	MORTALITY FROM SUBORNED CAUSES.																				All other causes																		
		Typhoid and paratyphoid fevers	Cerebro-spinal fever	Scarlet fever	Whooping cough	Diphtheria	Tuberculosis of respiratory system	Other forms of tuberculosis	Syphilitic diseases	Influenza	Measles	A.c. poliomyelitis and A.c. encephalitis	A.c. infectious encephalitis	Cancer of buccal cavity and oesophagus (males)	Cancer of uterus (females)	Cancer of stomach and duodenum	Cancer of breast	Cancer of all other sites	Diabetes	Intra-cranial vascular lesions	Heart disease		Other diseases of circulatory system	Bronchitis	Pneumonia	Other respiratory diseases	Ulcer of stomach or duodenum	Diarrhoea (under 2 years)	Appendicitis	*Other digestive diseases	Nephritis	Puerperal and post-abortive sepsis	Other maternal causes	Premature birth	Congenital malforma- tions, birth injury, infantile disease	Suicide	Road traffic accidents	Other violent causes		
Denton	293	—	—	1	—	—	5	2	3	4	—	—	1	4	5	7	2	26	2	36	104	6	20	8	2	3	1	1	7	6	4	—	—	7	6	4	1	1	18	
Droylsden	250	—	—	—	4	—	13	2	1	4	—	—	—	1	1	6	2	30	2	21	74	2	16	8	6	—	1	3	7	—	5	9	—	1	3	7	—	4	5	20
Eccles (B)	535	—	1	—	—	—	23	3	1	7	—	—	2	2	5	21	8	43	4	66	122	12	48	15	10	2	2	6	1	5	11	—	—	9	13	1	8	12	74	
Failsworth	206	—	—	—	1	—	10	—	—	3	—	—	—	—	—	5	4	18	3	25	40	9	13	11	5	1	1	2	—	7	14	—	—	2	2	2	1	3	25	
Farnworth (B)	337	—	2	—	2	3	9	—	—	4	—	—	—	5	4	8	7	32	4	29	88	5	36	11	4	4	1	—	—	9	16	2	1	8	6	3	3	6	25	
Fleetwood (B)	270	—	—	—	—	—	10	—	2	2	—	—	—	—	2	7	1	24	—	32	78	2	15	8	1	—	1	6	12	2	7	9	—	1	6	12	2	1	12	36
Formby	141	—	—	—	—	—	4	2	—	—	—	—	—	—	1	3	7	11	1	14	60	6	2	6	2	2	2	2	3	2	1	1	—	—	2	3	2	—	1	8
Fulwood	191	—	—	—	1	—	5	1	1	2	1	—	1	—	1	4	4	19	1	16	53	4	12	8	1	1	1	—	—	8	3	—	—	2	4	—	2	5	31	
Golborne	172	—	—	—	1	—	5	—	—	—	2	—	—	—	2	7	8	13	2	23	39	8	12	6	2	1	1	6	3	1	3	3	—	—	1	6	3	2	2	20
Grange	42	—	—	—	—	—	—	—	—	1	—	—	—	—	—	2	2	6	1	7	11	1	2	1	—	—	—	—	—	1	1	—	—	—	—	—	—	—	6	
Great Harwood	164	—	—	—	—	1	5	—	1	3	—	—	1	2	2	5	1	15	1	17	55	5	10	1	—	1	3	—	—	7	1	—	—	2	3	2	2	3	15	
Haslingden (B)	224	—	—	—	—	—	5	—	1	4	—	—	2	2	1	8	3	16	2	32	82	5	12	2	2	2	1	4	3	1	4	10	—	1	1	1	2	4	10	
Haydock	89	—	—	—	1	—	2	—	—	—	—	—	—	—	—	2	—	8	1	6	32	4	6	2	—	—	—	—	—	1	1	—	—	1	4	2	1	1	2	12
Heywood (B)	352	—	—	—	—	—	7	3	—	4	—	—	2	—	2	15	1	27	1	39	93	13	35	20	5	3	1	1	7	5	—	2	7	8	3	—	—	6	42	
Hindley	244	—	—	—	1	3	9	1	—	4	—	—	5	2	2	8	6	11	1	38	56	22	11	13	—	2	—	7	3	4	6	—	—	7	3	—	—	4	20	
Horwich	198	—	—	—	1	—	3	1	2	2	—	1	1	—	4	6	1	18	1	28	60	1	15	4	1	2	—	4	3	6	6	—	—	4	3	3	2	2	20	
Huyton-with-Roby	442	—	—	1	5	3	28	8	2	4	—	—	3	1	4	14	5	34	4	43	91	8	18	31	5	3	31	1	2	1	2	4	—	1	16	14	1	6	6	45
Ince-in-Makerfield	232	—	1	—	1	—	3	1	—	—	—	—	—	5	3	6	2	16	5	24	52	9	23	13	1	1	1	2	—	2	8	—	—	8	10	3	1	5	27	
Irlam	144	—	—	—	1	—	5	—	1	1	—	—	—	2	4	3	—	20	1	17	33	3	9	10	4	1	1	1	4	1	4	—	—	4	5	4	2	1	7	
Kearsley	112	—	—	—	—	—	7	—	—	1	—	—	—	1	—	3	—	10	—	14	24	3	10	2	1	2	2	3	1	3	1	—	—	4	3	1	3	3	15	
Kirkham	61	—	—	—	—	—	1	1	—	1	—	—	—	—	—	3	2	2	1	9	10	1	8	2	1	—	2	1	3	3	1	—	—	2	—	—	1	6		
Lancaster (B)	503	—	—	—	—	1	25	4	3	4	—	—	—	1	2	12	9	57	2	72	129	24	22	9	5	6	1	10	13	2	12	24	—	1	10	13	6	2	11	34
Lees	58	—	—	—	—	—	1	—	—	1	1	—	—	—	—	2	—	3	—	4	16	1	8	3	—	—	—	1	2	3	—	—	—	1	2	—	—	1	9	
Leigh (B)	535	—	1	—	—	—	15	3	3	3	—	—	—	1	1	20	2	50	4	59	96	28	44	24	3	4	6	1	7	16	—	—	15	11	8	2	27	81		

TABLE 3—continued.

RURAL DISTRICTS.		MORTALITY FROM SUBJOINED CAUSES.																																								
		Total No. of deaths from all causes	Typhoid and paratyphoid fevers	Cerebro-spinal fever	Scarlet fever	Whooping cough	Diphtheria	Tuberculosis of respiratory system	Other forms of tuberculosis	Syphilitic diseases	Influenza	Measles	Ac. poliomyelitis and polio-encephalitis	Ac. infectious encephalitis	Cancer of buccal cavity and oesophagus (males)	Cancer of uterus (females)	Cancer of stomach and duodenum	Cancer of breast	Cancer of all other sites	Diabetes	Intra-cranial vascular lesions	Heart disease	Other diseases of circulatory system	Bronchitis	Pneumonia	Other respiratory diseases	Ulcer of stomach or duodenum	Diarrhoea (under 2 years)	Appendicitis	*Other digestive diseases	Nephritis	Puerperal and post-abortive sepsis	Other maternal causes	Premature birth	Congenital malforma- tions, birth injury, infantile disease	Suicide	Road traffic accidents	Other violent causes	All other causes			
	Leyland	—	—	—	—	4	1	—	3	—	—	—	—	1	—	4	3	14	—	15	48	5	10	7	—	—	2	—	—	8	3	—	1	2	7	—	2	3	15		
	Litherland	—	—	2	1	15	4	1	3	1	—	—	1	2	2	5	4	15	—	21	48	7	11	14	—	4	1	2	—	—	8	4	—	1	8	9	2	3	3	30	
	Littleborough	—	—	—	—	—	—	1	6	—	—	—	—	—	3	4	5	14	—	14	48	6	17	—	—	—	—	—	1	2	2	6	1	1	5	2	4	—	4	12	
	Little Lever	—	—	—	—	1	—	1	—	—	—	—	—	1	—	2	—	5	—	8	23	3	12	4	—	2	—	1	—	2	2	2	—	—	—	1	1	—	—	2	3
	Longridge	—	—	—	—	2	1	—	1	—	—	—	—	—	—	—	1	8	2	7	17	—	—	5	—	2	—	—	—	1	2	1	2	—	—	—	—	—	—	—	3
	Lytham Saint Annes (B)	—	—	1	—	10	—	2	5	—	—	—	1	3	4	13	15	40	2	82	163	11	34	7	1	3	1	—	1	6	26	—	—	—	3	6	2	5	7	38	
	Middleton (B)	1	—	—	—	17	4	4	2	—	—	—	—	4	4	16	4	35	1	40	110	11	19	16	—	4	5	5	2	4	9	—	1	4	8	6	3	3	17		
	Milnrow	—	—	—	—	2	—	—	1	—	—	—	—	—	—	4	1	12	—	18	21	9	11	2	1	1	—	—	2	3	1	—	—	3	2	1	—	1	9		
	Morecambe & Heysham (B)	—	1	—	—	10	4	1	5	—	—	1	—	3	5	13	6	51	12	89	213	24	25	7	—	5	5	1	—	15	9	—	—	9	12	4	2	4	34		
	Mossley (B)	—	—	—	—	3	1	—	1	—	—	—	—	2	—	4	3	13	—	14	45	9	8	6	—	1	—	—	—	5	10	—	—	2	4	—	—	2	9		
	Nelson (B)	—	—	—	—	12	3	—	5	—	—	1	—	2	4	18	5	38	7	76	138	19	39	13	6	9	5	—	2	9	16	—	—	5	6	6	5	7	44		
	Newton-le-Willows	1	—	—	1	6	2	1	4	—	—	1	—	1	3	12	2	24	1	28	63	8	15	6	2	2	—	—	2	1	5	5	—	—	6	6	3	2	5	20	
	Ormskirk	1	—	—	1	6	—	1	4	—	—	—	—	3	—	10	5	20	2	28	61	—	12	7	—	2	—	—	—	4	4	—	—	—	2	9	—	2	3	29	
	Orrell	—	—	—	—	2	2	—	1	—	—	1	—	—	—	—	—	6	1	9	25	—	6	2	3	—	—	—	1	1	3	—	—	—	1	7	—	—	4	20	
	Oswaldtwistle	—	—	—	1	5	7	—	2	—	—	—	—	2	1	5	4	18	3	20	56	5	17	6	5	1	—	—	1	5	5	—	—	—	2	6	3	—	2	12	
	Padiham	—	—	—	2	5	—	2	3	—	—	—	—	—	1	2	—	15	1	17	50	8	13	8	1	3	—	—	1	2	1	—	—	4	3	2	1	2	9		
	Poulton-le-Fylde	—	—	—	—	2	—	1	1	—	—	—	—	—	—	3	1	10	—	13	30	10	6	1	2	1	—	—	—	—	—	—	—	1	—	—	—	3	13		
	Preesall	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	4	14	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	5		
	Prescot	—	1	—	—	8	—	—	—	—	—	—	—	1	1	4	1	7	—	9	28	5	9	2	—	—	1	7	—	2	1	—	—	10	2	—	—	2	26		
	Prestwich (B)	—	—	—	—	10	1	1	3	—	—	—	—	1	1	8	10	43	3	36	92	25	23	15	6	1	1	1	1	9	15	—	—	7	8	3	4	5	35		
	Radcliffe (B)	—	—	—	—	3	—	1	3	—	—	—	—	1	5	13	3	41	2	28	129	16	32	10	3	—	—	1	—	10	4	—	—	7	8	2	—	—	11	22	
	Rainford	—	—	—	1	2	—	—	1	—	—	—	—	2	—	—	1	8	1	6	14	1	3	1	—	1	—	—	—	2	1	—	—	1	1	—	1	—	2	6	
	Ramsbottom	—	—	1	—	7	—	2	4	—	—	—	—	—	2	7	6	15	1	26	63	3	20	8	2	2	—	3	—	9	6	—	—	1	2	4	3	—	1	13	
	Rawtenstall (B)	—	—	1	—	11	3	2	3	—	—	—	—	5	5	11	5	33	3	54	115	3	7	7	3	7	—	1	1	5	10	—	—	3	6	5	6	4	8	19	

TABLE 3—continued.

URBAN DISTRICTS.		Total No. of deaths from all causes		MORTALITY FROM SUBJOINED CAUSES.																																					
				Typhoid and paratyphoid fevers	Cerebro-spinal fever	Scarlet fever	Whooping cough	Diphtheria	Tuberculosis of respiratory system	Other forms of tuberculosis	Syphilitic diseases	Influenza	Miscles	Ac. poliomyelitis and polio-encephalitis	Ac. infectious encephalitis	Cancer of buccal cavity and oesophagus (males)	Cancer of uterus (females)	Cancer of stomach and duodenum	Cancer of breast	Cancer of all other sites	Diabetes	Intra-cranial vascular lesions	Heart disease	Other diseases of circulatory system	Bronchitis	Pneumonia	Other respiratory diseases	Ulcer of stomach or duodenum	Diarrhoea (under 2 years)	Appendicitis	*Other digestive diseases	Nephritis	Puerperal and post-abortive sepsis	Other maternal causes	Premature birth	Congenital malforma- tions, birth injury, infantile disease	Suicide	Road traffic accidents	Other violent causes	All other causes	
Rishton	87	—	—	—	4	2	1	—	—	—	—	—	—	1	1	7	2	12	25	2	2	7	1	—	—	1	—	—	2	1	—	—	1	—	—	2	—	2	13
Royton	188	—	—	—	4	1	—	4	—	—	—	1	4	6	1	14	1	15	54	10	10	11	9	2	3	—	1	—	3	—	1	1	—	—	2	2	4	25	
Skelmersdale	86	—	—	—	2	—	—	—	—	—	—	—	2	1	1	1	1	15	26	—	—	5	5	—	1	—	1	4	2	1	—	—	1	4	2	1	3	8	
Standish-with-Langtree	101	—	—	—	2	1	—	1	—	—	—	1	—	1	2	9	—	15	24	10	10	10	1	—	—	—	—	2	1	2	—	—	—	2	1	1	2	3	12
Stretford (B)	705	—	—	—	37	8	1	6	—	1	2	6	12	15	11	78	6	79	162	13	47	40	12	3	7	2	17	14	1	—	—	10	21	4	4	5	79		
Swinton & Pendlebury (B)	492	—	—	—	1	4	1	3	—	—	1	1	3	16	9	51	6	50	134	14	32	14	8	2	5	1	11	9	—	—	—	5	10	8	3	6	57		
Thornton Cleveleys	262	—	—	—	3	1	1	4	—	—	—	—	2	5	2	21	3	29	100	4	20	11	2	2	2	1	5	5	—	1	5	2	2	5	—	—	4	24	
Tettington	93	—	—	—	2	—	—	1	—	—	—	1	1	2	1	7	2	12	34	5	4	2	1	1	—	—	2	—	2	—	—	—	—	2	3	—	2	10	
Trawden	26	—	—	—	2	1	—	—	—	—	—	1	1	1	—	3	1	—	5	—	4	—	2	—	—	—	—	—	—	—	—	—	—	—	1	—	—	3	
Turton	139	—	—	—	1	1	2	—	—	—	—	—	1	6	4	11	—	19	41	8	7	2	2	2	2	—	—	5	3	—	—	—	6	5	2	—	5	15	
Tyldesley	195	—	—	—	5	—	—	—	—	—	—	3	2	9	2	6	2	22	37	11	20	5	7	2	—	—	3	1	—	—	—	—	—	6	5	—	5	40	
Ulverston	121	—	—	—	6	—	—	4	—	—	—	—	3	3	2	9	—	14	45	—	2	4	3	2	—	—	5	—	—	—	—	—	—	—	2	1	2	12	
Upholland	54	—	—	—	1	—	—	—	—	—	—	1	1	2	1	5	—	6	9	—	3	3	3	2	—	—	2	3	—	—	—	—	—	1	4	—	2	1	6
Urmston	399	—	—	—	14	1	3	4	—	—	1	2	1	8	9	40	8	44	105	14	29	12	11	2	2	2	9	7	—	—	—	—	—	5	4	1	3	6	52
Walton-le-Dale	162	—	—	—	4	2	—	—	—	—	1	1	5	5	3	14	2	17	45	3	5	4	2	—	2	—	5	5	—	—	1	9	2	1	2	4	18		
Wardle	52	—	—	—	2	—	—	2	—	—	—	—	—	3	1	2	1	5	13	—	10	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	10	
Westhoughton	200	—	—	—	1	—	—	2	—	1	—	—	1	7	1	15	5	23	66	11	14	6	1	1	1	—	4	3	—	—	1	2	6	1	1	4	21		
Whitefield	149	—	—	—	—	1	1	1	—	—	1	—	2	1	3	15	—	22	45	1	9	3	3	1	1	—	2	2	—	—	—	1	7	—	5	2	20		
Whitworth	113	—	—	—	5	1	—	2	—	—	—	—	1	2	1	6	3	9	36	11	6	7	1	—	—	—	2	1	—	—	—	4	—	2	—	2	10		
Widnes (B)	510	—	—	—	22	4	1	13	—	—	—	2	2	11	7	44	3	46	100	12	30	32	8	4	25	1	14	6	—	—	1	1	25	19	4	6	12	53	
Withnell	30	—	—	—	—	—	—	—	—	—	—	1	—	2	1	1	1	5	9	2	1	1	—	—	—	—	1	—	—	—	—	1	1	1	—	—	1	2	
Worsley	322	—	—	—	6	2	1	—	—	—	1	—	2	10	7	26	3	39	109	9	20	7	4	—	2	2	1	5	10	—	—	—	8	8	4	2	5	29	
Total Urban Districts	21,239	3	14	3	41	23	664	130	69	253	7	7	38	123	180	615	325	1882	167	2557	5973	658	1391	714	266	153	169	51	479	536	11	29	412	480	190	143	430	2053	

TABLE 3—continued.

MORTALITY FROM SUBJOINED CAUSES.

RURAL DISTRICTS.		Total No. of deaths from all causes	MORTALITY FROM SUBJOINED CAUSES.																																						
			Typhoid and paratyphoid fevers	Cerebro-spinal fever	Scarlet fever	Whooping cough	Diphtheria	Tuberculosis of respiratory system	Other forms of tuberculosis	Syphilitic diseases	Influenza	Measles	Ac. poliomyelitis and encephalitis	Ac. infectious encephalitis	Cancer of buccal cavity and oesophagus (males)	Cancer of uterus (females)	Cancer of stomach and duodenum	Cancer of breast	Cancer of all other sites	Diabetes	Intra-cranial vascular lesions	Heart disease	Other diseases of circulatory system	Bronchitis	Pneumonia	Other respiratory diseases	Ulcer of stomach or duodenum	Diarrhoea (under 2 years)	Appendicitis	*Other digestive diseases	Nephritis	Puerperal and post-abortive sepsis	Other maternal causes	Premature birth	Congenital malforma- tions, birth injury, infantile disease	Suicide	Road traffic accidents	Other violent causes	All other causes		
Blackburn	131	—	—	—	—	—	—	1	—	—	—	2	1	4	4	15	1	21	33	6	5	6	2	2	6	2	—	—	1	2	5	1	—	1	4	—	3	1	7	
Burnley	236	—	—	—	—	—	—	5	—	—	1	3	—	4	4	24	1	25	72	5	12	5	2	2	5	2	—	—	1	7	6	—	1	2	6	5	—	10	28	
Chorley	269	—	—	—	—	—	—	4	—	—	1	1	1	12	8	16	3	38	91	9	17	9	2	2	9	2	3	3	—	—	6	—	1	8	4	1	4	2	13	
Clitheroe	80	—	—	—	—	—	—	—	—	—	—	—	—	3	—	11	—	8	27	2	7	2	3	3	2	3	—	—	1	1	2	—	—	—	1	—	—	3	6	
Fylde	134	—	—	—	—	—	—	1	—	—	—	—	—	4	3	12	3	21	31	4	1	4	2	2	2	2	2	2	—	7	2	—	—	3	—	1	1	3	19	
Garstang	143	—	—	—	—	—	—	2	—	—	—	2	1	3	—	15	1	17	43	2	11	2	1	1	1	1	1	1	1	7	3	—	1	1	3	4	4	3	9	
Lancaster	133	—	—	—	—	—	—	—	—	—	—	1	2	5	—	6	2	18	42	2	4	2	3	3	2	2	2	—	—	6	2	1	—	—	—	1	2	1	22	
Limehurst	97	—	—	—	—	—	—	—	—	—	—	—	—	2	1	9	—	13	36	4	6	4	—	—	—	—	—	—	—	4	4	—	3	4	—	—	—	1	2	
Lunesdale	81	—	—	—	—	—	—	—	—	—	—	1	—	2	2	3	—	11	27	—	1	—	2	2	—	—	—	—	1	3	2	—	—	—	4	1	—	1	10	
Preston	428	—	—	—	—	—	—	5	1	—	—	4	2	14	9	37	1	51	148	19	14	19	7	2	7	2	2	3	1	11	5	—	—	6	10	2	5	9	29	
Ulverston	226	—	1	—	—	—	—	7	—	—	—	1	—	8	4	18	3	34	75	10	7	10	2	2	2	2	2	—	—	2	4	—	—	4	6	1	2	2	20	
Warrington .....	.....	222	1	—	—	—	—	—	3	—	—	—	—	1	3	5	29	2	17	46	8	19	10	3	3	3	3	—	—	5	6	—	2	6	9	2	2	6	19	
West Lancashire	452	—	—	—	—	—	—	7	—	—	1	3	4	13	15	43	3	45	140	4	21	13	7	7	7	7	5	5	—	8	13	—	3	13	11	7	2	2	6	41
Whiston	326	—	—	—	—	—	—	3	1	—	—	1	4	3	3	23	2	39	56	8	19	13	8	8	8	8	1	21	—	5	8	—	1	5	21	2	4	8	46	
Wigan	88	—	—	—	—	—	—	1	1	—	—	1	1	2	1	5	1	14	33	2	6	2	—	—	—	—	—	—	—	—	3	—	1	1	2	—	—	1	7	
Total Rural Districts .....	.....	3,046	1	1	—	2	2	87	24	8	39	2	—	3	18	82	56	266	23	372	900	150	92	101	44	19	38	5	77	71	2	10	53	86	28	28	58	278		
Total Urban Districts .....	.....	21,239	3	14	3	41	23	664	130	69	253	7	7	38	123	180	615	325	1882	167	2557	5973	658	1391	714	266	153	169	51	479	536	11	29	412	480	190	143	430	2053	
Administrative County .....	.....	24,285	4	15	3	43	25	751	154	77	292	9	7	41	143	198	697	381	2148	190	2929	6873	750	1541	815	310	172	207	56	556	607	13	39	465	566	218	171	488	2331	

* Includes deaths from diarrhoea at ages 2 years and over.

TABLE 4—CAUSES OF DEATH at different periods of life.

Year ended 31st December, 1946.

CAUSES OF DEATH.	Col.	AD- MINIS- TRATIVE COUNTY. TOTAL DEATHS.	Sex.	AGGREGATE OF URBAN DISTRICTS.							AGGREGATE OF RURAL DISTRICTS.							Col.
				YEARS.							YEARS.							
				All Ages	0-	1-	5-	15-	45-	65-	All Ages	0-	1-	5-	15-	45-	65-	
ALL CAUSES		24,285	M. F.	10636 10603	821 621	122 97	113 75	925 861	3049 2414	5606 6535	1551 1495	112 110	17 14	12 10	138 123	409 334	863 904	
Typhoid and paratyphoid fevers	1	4	M. F.	1 2	— —	— —	— —	— 2	1 —	— —	1 —	— —	— —	— —	1 —	— —	— —	1
Cerebro-spinal fever	2	15	M. F.	5 9	2 2	1 5	— 1	2 1	— —	— —	1 —	— —	— —	— —	1 —	— —	— —	2
Scarlet fever	3	3	M. F.	2 1	— —	1 —	1 1	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	3
Whooping cough	4	43	M. F.	21 20	16 11	5 8	— 1	— —	— —	— —	1 1	1 —	— 1	— —	— —	— —	— —	4
Diphtheria	5	25	M. F.	14 9	4 —	5 1	5 4	— 3	— 1	— —	2 —	— —	1 —	— —	1 —	— —	— —	5
Tuberculosis of respiratory system	6	751	M. F.	411 253	— 2	3 —	4 4	185 197	174 35	45 15	51 36	— 1	— —	— 1	26 23	18 11	7 —	6
Other forms of tuberculosis	7	154	M. F.	71 59	1 3	29 12	8 11	17 21	11 10	5 2	11 13	— —	3 2	2 3	5 4	— 2	1 2	7
Syphilitic diseases	8	77	M. F.	48 21	1 2	— —	— —	9 6	29 8	9 5	7 1	— —	— —	— —	3 —	2 —	2 1	8
Influenza	9	292	M. F.	112 141	2 1	2 1	1 1	11 12	47 36	49 90	21 18	— —	— —	— —	— 1	8 4	13 13	9
Measles	10	9	M. F.	3 4	— 2	3 2	— —	— —	— —	— —	1 1	— 1	1 —	— —	— —	— —	— —	10
Acute poliomyelitis and polio- encephalitis	11	7	M. F.	4 3	— —	— 1	1 2	3 —	— —	— —	— —	— —	— —	— —	— —	— —	— —	11
Acute infectious encephalitis	12	41	M. F.	19 19	— —	— 1	1 —	9 8	7 6	2 4	2 1	— —	— —	— —	1 —	— 1	1 —	12
Cancer of buccal cavity & oesophagus (m), Cancer of uterus (f)	13	143 198	M. F.	123 180	— —	— —	— —	1 15	27 111	95 54	20 18	— —	— —	— —	— 1	6 13	14 4	13
Cancer of stomach and duodenum	14	697	M. F.	327 288	— —	— —	— —	19 10	142 100	166 178	45 37	— —	— —	— —	2 —	21 12	22 25	14
Cancer of breast	15	381	M. F.	3 322	— —	— —	— —	— 38	2 149	1 135	— 56	— —	— —	— —	— 6	— 26	— 24	15
Cancer of all other sites	16	2,148	M. F.	1041 841	— 1	3 2	4 2	70 67	430 322	534 447	149 117	— —	— —	— 1	14 8	65 49	70 59	16
Diabetes	17	190	M. F.	62 105	— —	— —	— 1	6 9	22 25	34 70	11 12	— —	— —	— —	1 3	3 3	7 6	17
Intra-cranial vascular lesions	18	2,929	M. F.	1125 1432	1 —	1 —	— —	10 19	281 317	832 1096	156 216	— —	— 1	— —	1 4	36 56	119 155	18
Heart disease	19	6,873	M. F.	2923 3050	— —	— —	2 6	144 121	818 572	1959 2351	467 433	— —	— —	— —	16 19	117 76	334 338	19
Other diseases of the circulatory system	20	750	M. F.	320 338	1 —	— —	— —	6 9	74 54	239 275	50 42	1 —	— —	— —	— 1	11 6	38 35	20
Bronchitis	21	1,541	M. F.	793 598	26 19	1 6	2 1	37 20	272 105	455 447	86 64	3 4	1 1	— —	7 1	35 9	40 49	21
Pneumonia	22	815	M. F.	375 339	116 98	18 13	5 4	40 25	82 56	114 143	54 47	9 13	2 1	1 2	6 4	12 7	24 20	22
Other respiratory diseases	23	310	M. F.	146 120	5 —	4 1	2 —	17 19	72 50	46 50	26 18	— 2	— —	1 1	3 4	9 7	13 4	23
Ulcer of stomach or duodenum	24	172	M. F.	125 28	— —	— —	— —	28 3	64 15	33 10	17 2	— —	— —	— —	2 —	7 2	8 —	24
Diarrhoea (under 2 years)	25	207	M. F.	96 73	90 70	6 3	— —	— —	— —	— —	17 21	16 19	1 2	— —	— —	— —	— —	25
Appendicitis	26	56	M. F.	30 21	— —	1 —	7 1	8 7	6 7	8 6	5 —	— —	1 —	2 —	— —	1 —	1 —	26
Other digestive diseases	27	556	M. F.	200 279	6 10	5 5	7 3	21 38	78 86	83 137	41 36	3 4	— —	1 —	2 6	15 8	20 18	27
Nephritis	28	607	M. F.	265 271	— 1	1 3	1 1	28 33	92 97	143 136	38 33	— —	1 —	— 1	3 3	13 12	21 17	28
Puerperal and post-abortive sepsis	29	13	F.	11	—	—	—	11	—	—	2	—	—	—	2	—	—	29
Other maternal causes	30	39	F.	29	—	—	—	29	—	—	10	—	—	—	9	1	—	30
Premature birth	31	465	M. F.	246 166	246 166	— —	— —	— —	— —	— —	27 26	27 26	— —	— —	— —	— —	— —	31
Congenital malformations, birth injury, infantile disease	32	566	M. F.	269 211	246 190	6 8	5 5	6 4	5 3	1 1	47 39	42 37	2 1	— —	3 1	— —	— —	32
Suicide	33	218	M. F.	125 65	— —	— —	— —	32 18	55 30	38 17	13 15	— —	— —	— —	6 6	3 6	4 3	33
Road traffic accidents	34	171	M. F.	108 35	— —	12 7	13 8	42 5	24 5	17 10	21 7	— —	1 2	3 —	12 1	3 1	2 3	34
Other violent causes	35	488	M. F.	261 169	20 15	8 5	23 5	80 18	74 21	56 105	33 25	3 1	1 —	1 —	5 1	8 4	15 19	35
All other causes	36	2,331	M. F.	962 1091	38 28	7 13	21 13	94 93	160 193	642 751	130 148	7 2	2 3	1 1	17 15	16 18	87 109	36

Note.—Diarrhoea at ages 2 years and over is included under No. 27 "Other digestive diseases".

TABLE 5—HOUSING.
SUMMARY OF WORK CARRIED OUT DURING THE YEAR 1946.

URBAN DISTRICTS	NEW HOUSES ERECTED DURING YEAR				UNFIT DWELLINGS						
	Total	By Local Authority	By other Local Authorities	By other bodies or persons	Total No. inspected for housing defects	No. of inspections made for the purpose	No. of houses inspected under Housing Consol'd Regs. (included in total col.)	No. of inspections made for the purpose	No. found unfit for human habita- tion	No. found not in all respects reason- ably fit for human habita- tion	No. of defective houses rendered fit as result of informal action
Abram.....	17	17	—	—	143	257	27	52	10	17	15
Accrington (B)	92	80	—	12	260	495	3	18	1	259	196
Adlington	4	—	—	4	39	78	—	—	—	33	33
Ashton-in-Makerfield	66	50	—	16	663	1,522	24	24	7	390	340
Ashton-under-Lyne(B)	84	15	—	69	1,155	2,354	254	263	9	1,146	987
Aspull	—	—	—	—	320	320	—	—	—	67	50
Atherton	50	—	—	50	573	892	—	—	1	407	394
Audenshaw	33	—	—	33	497	795	74	92	67	196	168
Bacup (B)	30	30	—	—	178	404	36	94	—	142	121
Barrowford	4	—	—	4	—	—	—	—	—	—	—
Billinge & Winstanley	9	—	—	9	154	184	—	—	—	76	7
Blackrod	—	—	—	—	160	300	24	34	30	70	45
Brierfield	19	19	—	—	253	303	—	—	4	158	118
Carnforth	6	—	—	6	138	378	16	58	—	130	130
Chadderton	74	—	—	74	2,027	6,453	—	—	2	2,025	1,073
Chorley (B)	—	—	—	—	1,308	1,513	447	493	4	354	915
Church	—	—	—	—	216	268	—	—	—	69	46
Clayton-le-Moors	—	—	—	—	32	80	—	—	—	17	27
Clitheroe (B)	50	50	—	—	36	39	—	—	—	34	34
Colne (B)	—	—	—	—	62	122	5	15	3	3	13
Crompton	—	—	—	—	193	450	—	—	—	106	72
Crosby (B)	32	18	—	14	2,920	10,686	—	—	—	2,155	1,858
Dalton-in-Furness	4	—	—	4	247	307	—	—	—	92	87
Darwen (B)	20	20	—	—	33	75	—	—	—	33	7
Denton	139	80	—	59	1,190	2,174	703	703	—	574	540
Droylsden	—	—	—	—	418	470	86	110	—	118	64
Eccles (B)	42	34	—	8	436	436	46	46	4	432	205
Failsworth	56	—	—	56	1,110	2,642	91	331	—	1,110	324
Farnworth (B)	95	29	—	66	610	3,026	3	6	3	608	323
Fleetwood (B)	105	68	—	37	464	1,154	228	565	—	159	80
Formby	75	—	—	75	28	31	10	14	3	9	8
Fulwood	58	—	—	58	26	68	—	—	5	15	14
Golborne	28	26	—	2	303	796	101	206	3	99	231
Grange	5	—	—	5	31	47	—	—	—	30	24
Great Harwood	26	25	—	1	243	398	—	—	—	197	142
Haslingden (B)	42	41	—	1	290	651	—	—	—	290	224
Haydock	11	—	—	11	164	234	—	—	—	164	164
Heywood (B)	58	50	—	8	251	574	—	—	6	112	198
Hindley	—	—	—	—	677	677	—	—	—	584	551

TABLE 5—continued.

URBAN DISTRICTS	NEW HOUSES ERECTED DURING YEAR				UNFIT DWELLINGS						
	Total	By Local Authority	By other Local Authorities	By other bodies or persons	Total No. inspected for housing defects	No. of inspections made for the purpose	No. of houses inspected under Housing Consol'd Regs. (included in total col.)	No. of inspections made for the purpose	No. found unfit for human habita- tion	No. found not in all respects reason- ably fit for human habita- tion	No. of defective houses rendered fit as result of informal action
Horwich	15	—	—	15	194	912	—	—	—	151	149
Huyton-with-Roby	263	—	40	223	379	680	158	158	—	379	291
Ince-in-Makerfield	—	—	—	—	815	1,238	24	24	—	811	178
Irlam	5	—	—	5	415	415	33	33	—	325	291
Kearsley	14	5	—	9	97	97	—	—	—	97	85
Kirkham	18	—	—	18	65	127	8	19	3	—	8
Lancaster (B).....	103	108	—	—	42	112	—	—	—	42	8
Lees	4	—	—	4	428	542	—	—	—	71	85
Leigh (B)	135	110	—	25	1,665	4,960	—	—	2	1,663	535
Leyland	32	30	—	2	150	420	—	—	2	36	30
Litherland	288	111	—	177	230	549	—	—	—	230	230
Littleborough.....	—	—	—	—	202	415	—	—	—	—	—
Little Lever	3	—	—	3	60	164	—	—	1	43	24
Longridge	2	—	—	2	169	169	—	—	—	7	15
LythamSt.Annes(B).....	99	57	—	42	38	47	10	15	—	10	28
Middleton (B)	105	68	—	37	162	164	8	8	2	160	132
Milnrow	20	20	—	—	280	309	—	—	—	116	104
Morecambe and Heysham (B)	78	14	—	64	376	808	—	—	—	338	229
Mossley (B)	14	—	—	14	153	330	11	25	—	119	105
Nelson (B)	2	2	—	—	152	248	—	—	—	96	79
Newton-le-Willows	98	44	—	54	3	5	3	5	2	1	1
Ormskirk	58	52	—	6	239	592	19	19	3	210	187
Orrell	8	—	—	8	706	1,788	—	—	23	197	99
Oswaldtwistle	36	30	—	6	128	190	—	—	—	70	51
Padiham	—	—	—	—	2,744	2,744	—	—	—	—	—
Poulton-le-Fylde	68	—	—	68	70	128	—	—	—	49	49
Preesall	31	16	—	15	79	170	3	9	3	56	56
Prescot	97	96	—	1	1,047	1,742	—	—	3	32	60
Prestwich (B).....	4	4	—	—	563	1,813	—	—	—	175	51
Radcliffe (B)	65	62	—	3	66	89	8	10	12	46	30
Rainford	—	—	—	—	36	50	—	—	—	10	36
Ramsbottom	44	41	—	3	97	97	—	—	—	92	63
Rawtenstall (B)	23	23	—	—	998	1,603	1	3	1	997	997
Rishton	—	—	—	—	59	180	—	—	—	59	28
Royton	3	—	—	3	202	451	—	—	—	158	131
Skelmersdale	12	12	—	—	1,012	2,036	85	140	50	391	309
Standish-with- Langtree	31	24	—	7	126	379	—	—	255	574	79
Stretford (B)	16	—	—	16	339	391	36	95	—	34	26

TABLE 5—continued.

URBAN DISTRICTS	NEW HOUSES ERECTED DURING YEAR				UNFIT DWELLINGS						
	Total	By Local Authority	By other Local Authorities	By other bodies or persons	Total No. inspected for housing defects	No. of inspections made for the purpose	No. of houses inspected under Housing Consol'd Regs. (included in total col.)	No. of inspections made for the purpose	No. found unfit for human habita- tion	No. found not in all respects reason- ably fit for human habita- tion	No. of defective houses rendered fit as result of informal action
Swinton and Pendlebury (B)	75	44	—	31	1,078	2,267	—	—	26	912	820
Thornton Cleveleys	145	—	—	145	163	304	—	—	—	154	140
Tottington	6	—	—	6	8	10	—	—	1	—	—
Trawden	—	—	—	—	—	—	—	—	—	—	—
Turton	3	—	—	3	179	204	—	—	14	165	140
Tyldesley	54	50	—	4	256	428	10	18	—	256	112
Ulverston	30	10	—	20	26	31	—	—	—	26	26
Upholland	4	—	—	4	102	102	—	—	—	89	35
Urmston	271	143	—	128	264	852	—	—	1	243	161
Walton-le-Dale	57	12	—	45	53	112	2	8	17	36	31
Wardle	10	10	—	—	23	37	99	128	—	23	23
Westhoughton	4	—	—	4	155	320	—	—	—	155	88
Whitefield	77	50	—	27	131	220	13	26	5	8	18
Whitworth	—	—	—	—	119	260	—	—	—	—	—
Widnes (B)	202	139	—	63	1,739	3,658	352	384	35	173	431
Withnell	—	—	—	—	82	84	—	—	—	82	60
Worsley	66	50	—	16	416	1,284	—	—	1	251	210
Total Urban Districts	4,137	2,089	40	2,008	37,228	78,980	3,061	4,251	624	22,898	16,982
RURAL DISTRICTS											
Blackburn	1	—	—	1	987	993	482	496	1	63	5
Burnley	—	—	—	—	182	378	182	378	—	49	36
Chorley	78	67	—	11	2,044	2,850	1,300	1,766	3	741	487
Clitheroe	—	—	—	—	976	1,023	755	802	—	195	52
Fylde	26	—	—	26	45	83	—	—	—	11	21
Garstang	33	32	—	1	1,221	1,221	—	—	1	167	23
Lancaster	47	30	—	17	242	518	19	40	14	98	34
Limehurst	8	—	—	8	483	821	—	—	—	329	286
Lunesdale	11	2	—	9	215	359	64	106	—	130	147
Preston	68	34	—	34	566	797	11	17	3	8	544
Ulverston	20	4	—	16	161	198	22	29	—	121	52
Warrington	67	—	—	67	245	645	—	—	3	242	160
West Lancashire	229	58	—	171	106	244	85	109	—	21	10
Whiston	50	50	—	—	3,263	3,625	—	—	25	220	148
Wigan	30	24	—	6	52	80	10	10	16	20	88
Total Rural Districts	668	301	—	367	10,788	13,835	2,930	3,753	66	2,415	2,093
Total Urban Districts	4,137	2,089	40	2,008	37,228	78,980	3,061	4,251	624	22,898	16,982
Total Administrative County	4,805	2,390	40	2,375	48,016	92,815	5,991	8,004	690	25,313	19,075

TABLE 6.—IMMUNISATION IN RELATION TO CHILD POPULATION.

Note:—An * inserted in the column denotes that no comparable figures are available.

Urban districts	Total number of children immunised						Estimated mid-year population, 1946 (under 5 years of age).	Percentage immunised	Total number of children immunised.			Estimated mid-year population, 1946 (5 to 14 years of age).	Percentage immunised.	Total immunised under 15 years of age.	Total population under 15 years of age.	Percentage immunised under 15 years of age.
	Age at 31st December, 1946															
	Under 1	1	2	3	4	Total under 5.										
Abram	—	43	55	60	52	210	517	40·6	284	269	553	862	64·1	763	1,379	55·3
Accrington (B)	—	127	166	218	257	768	2,670	28·7	1,137	1,164	2,301	4,380	52·5	3,069	7,050	43·5
Adlington	*	**	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ashton-in-Makerfield	61	139	191	198	198	787	1,500	52·4	1,218	970	2,188	2,530	86·4	2,975	4,030	73·8
Ashton-under-Lyno (B)	5	261	271	143	303	983	3,620	27·1	2,530	2,040	4,570	5,990	76·2	5,553	9,610	57·7
Aspull	—	142	91	43	57	333	538	61·8	296	406	702	1,000	70·2	1,035	1,538	67·2
Atherton	2	145	136	165	191	639	1,600	39·9	1,013	1,103	2,116	2,680	78·9	2,755	4,280	64·3
Audenshaw	—	91	105	101	143	440	986	44·6	320	501	821	1,420	57·7	1,261	2,406	52·4
Bacup (B)	—	102	237	191	170	700	1,350	51·8	1,113	1,132	2,245	2,350	95·5	2,945	3,700	79·5
Barrowford	—	31	33	28	36	128	290	44·1	137	207	344	490	70·2	472	780	60·5
Billinge and Winstanley	—	35	70	84	95	284	490	57·9	322	281	603	825	73·0	887	1,315	67·4
Blackrod	1	32	23	27	21	104	209	49·7	97	121	218	390	55·8	322	599	53·7
Brierfield	—	66	74	38	98	276	380	72·6	273	239	512	740	69·1	788	1,120	70·3
Carnforth	—	35	23	36	30	124	224	55·3	168	191	359	450	79·7	483	674	71·6
Chadderton	83	297	333	351	341	1,405	2,420	58·0	1,760	1,504	3,264	3,770	86·5	4,669	6,190	75·4
Chorley (B)	—	170	202	245	198	815	2,400	33·9	1,065	813	1,878	3,880	48·4	2,693	6,280	42·8
Church	—	31	34	37	21	123	343	35·8	135	197	332	564	58·8	455	907	50·1
Clayton-le-Moors	5	82	54	75	69	285	454	62·7	203	339	542	746	72·6	827	1,200	68·9
Clitheroe (B)	—	86	135	144	136	501	694	72·1	578	530	1,108	1,130	98·0	1,609	1,824	88·2
Colne (B)	1	168	200	229	174	772	1,360	56·7	881	922	1,803	2,290	78·7	2,575	3,650	70·5

TABLE 6—continued.

Urban districts	Total number of children immunised						Estimated mid-year population, 1946 (under 5 years of age).	Per-centage immu-nised	Total number of children immunised.			Estimated mid-year population, 1946 (5 to 14 years of age).	Per-centage immu-nised.	Total immunised under 15 years of age.	Total population under 15 years of age.	Percentage immunised under 15 years of age.
	Age at 31st December, 1946															
	Under 1	1	2	3	4	Total under 5.										
Crompton	—	150	189	154	168	661	951	69.5	650	487	1,137	1,430	79.5	1,798	2,381	75.5
Cresby (B)	26	363	353	425	419	1,586	4,610	34.4	2,162	2,286	4,448	8,080	55.0	6,034	12,690	47.5
Dalton-in-Furness	5	63	170	54	35	327	803	40.7	564	451	1,015	1,520	66.7	1,342	2,323	57.7
Darwen (B)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denton	1	247	405	303	317	1,273	2,090	60.9	1,647	1,188	2,835	3,150	90.0	4,108	5,240	78.3
Droylsden	2	157	290	291	283	1,023	1,930	53.0	1,339	885	2,224	3,190	69.7	3,247	5,120	63.4
Eccles (B)	28	281	445	384	405	1,543	3,160	48.8	2,394	1,983	4,377	5,570	78.5	5,920	8,730	67.8
Failsworth	5	191	263	220	222	901	1,470	61.2	1,037	910	1,947	2,200	88.5	2,848	3,670	77.6
Farnworth (B)	1	205	351	358	306	1,221	2,200	55.5	1,403	1,501	2,904	3,390	85.6	4,125	5,590	73.7
Fleetwood (B)	3	101	124	155	209	592	1,810	32.7	1,100	1,920	3,002	4,240	71.2	3,612	6,050	59.7
Fornby	1	78	98	112	129	418	706	59.2	566	689	1,255	1,370	91.6	1,673	2,076	80.5
Fulwood	—	136	132	151	148	567	729	77.7	543	730	1,273	1,520	83.7	1,840	2,249	81.8
Gelborne	2	149	149	190	160	650	1,290	50.3	806	857	1,663	2,110	78.8	2,313	3,400	68.0
Grange	—	3	11	3	—	17	106	16.0	40	57	97	285	34.0	114	391	29.1
Great Harwood	2	105	99	93	84	383	710	53.9	538	561	1,099	1,170	93.9	1,482	1,880	78.8
Haslingden (B)	2	40	95	125	117	379	883	42.9	733	743	1,476	1,540	95.8	1,855	2,423	76.5
Haydock	—	121	157	148	154	580	1,000	58.0	690	633	1,323	1,750	75.6	1,903	2,750	69.2
Heywood (B)	—	160	218	215	195	788	1,850	42.5	1,237	964	2,201	3,230	68.1	2,989	5,080	58.8
Hindley	—	133	179	157	161	630	1,610	39.1	754	800	1,554	2,430	63.9	2,184	4,040	54.0
Horwich	—	148	175	182	156	661	1,170	56.4	830	804	1,634	1,870	87.3	2,295	3,040	75.4
Huyton-with-Roby	84	585	671	628	591	2,559	4,930	51.9	4,570	3,231	7,801	10,250	76.1	10,360	15,180	68.2
Ince-in-Makerfield	—	111	144	165	180	600	1,550	38.7	932	817	1,749	3,290	53.1	2,349	4,840	48.5
Irlam	1	136	179	155	145	616	1,220	50.4	800	836	1,636	2,120	77.1	2,252	3,340	67.4
Kearsley	6	117	110	137	118	488	772	63.2	558	607	1,165	1,340	86.9	1,653	2,112	78.2
Kirkham	4	46	32	51	47	180	327	55.0	280	278	558	625	89.2	738	952	77.5

Urban districts	Total number of children immunised						Estimated mid-year population, 1946 (under 5 years of age).	Per-centage immu-nised	Total number of children immunised.			Estimated mid-year population, 1946 (5 to 14 years of age).	Per-centage immu-nised.	Total immunised under 15 years of age.	Total population under 15 years of age.	Percentage immunised under 15 years of age.
	Age at 31st December, 1946								Age at 31st Dec., 1946.							
	Under 1	1	2	3	4	Total under 5.			5 to 9	10 to 14	Total 5 to 14					
Lancaster (B)	2	335	328	502	541	1,708	3,330	51.2	2,559	3,092	5,651	6,760	83.5	7,359	10,090	72.9
Lees	7	84	45	47	37	220	297	74.0	232	181	413	478	86.4	633	775	81.6
Leigh (B)	6	261	344	289	260	1,160	3,890	29.8	1,776	2,314	4,090	6,180	66.1	5,250	10,070	52.1
Leyland	6	126	155	142	138	567	1,120	50.6	702	743	1,445	2,000	72.2	2,012	3,120	64.4
Litherland	1	198	266	192	195	852	1,550	54.9	1,184	853	2,037	2,730	74.6	2,889	4,280	67.5
Littleborough	—	85	115	117	103	420	719	58.4	504	545	1,049	1,230	85.2	1,469	1,949	75.3
Little Lever	3	48	54	41	42	188	363	51.7	224	224	448	559	80.1	636	922	68.9
Longridge	—	37	43	41	51	172	310	55.4	285	269	554	599	92.4	726	909	79.8
Lytham St. Annes (B)	10	265	264	232	253	1,024	1,530	66.9	1,353	1,323	2,676	2,980	89.7	3,700	4,510	82.0
Middleton (B)	18	289	375	341	290	1,313	2,280	57.5	1,429	1,651	3,080	3,990	77.1	4,393	6,270	70.0
Milnrow	6	98	66	68	74	312	582	53.6	433	448	881	949	92.8	1,193	1,531	77.9
Morcambe & Heysham (B)	4	177	183	194	255	813	2,150	37.8	1,274	1,048	2,322	3,770	61.5	3,135	5,920	52.9
Mossley (B)	—	66	153	102	131	452	767	58.9	625	442	1,067	1,190	89.6	1,519	1,957	77.6
Nelson (B)	—	168	279	274	357	1,078	2,090	51.5	1,353	1,411	2,764	3,500	78.9	3,842	5,590	68.7
Newton-le-Willows	10	128	213	201	174	726	1,580	45.9	824	1,065	1,889	3,160	59.7	2,615	4,740	55.1
Ormskirk	7	135	76	212	168	598	1,480	40.4	1,074	1,594	2,668	2,700	98.8	3,266	4,180	78.1
Orrell	—	31	132	70	77	310	652	47.5	302	398	700	1,160	60.3	1,010	1,812	55.7
Oswaldtwistle	—	90	68	74	76	308	831	37.0	311	505	816	1,370	59.5	1,124	2,201	51.0
Padiham	—	45	71	48	41	205	866	23.6	322	368	690	1,180	58.4	895	2,046	43.7
Poulton-le-Fylde	7	43	60	74	74	258	489	52.7	396	313	709	873	81.2	967	1,362	70.9
Preesall	—	34	34	21	23	112	138	81.1	100	90	190	290	65.5	302	428	70.5
Prescot	—	100	145	105	103	453	969	46.7	600	552	1,152	1,730	66.5	1,605	2,699	59.4
Prestwich (B)	117	246	254	260	176	1,053	2,220	47.4	1,365	1,090	2,455	3,770	65.1	3,598	5,990	58.5
Radcliffe (B)	2	137	222	179	198	738	2,010	36.7	1,258	1,362	2,620	3,390	77.2	3,358	5,400	62.1
Rainford	—	37	50	51	44	182	263	69.2	276	222	498	532	93.6	680	795	85.5

TABLE 6—continued.

Urban districts	Total number of children immunised						Estimated mid-year population, 1946 (under 5 years of age).	Per-centage immu-nised	Total number of children immunised.			Estimated mid-year population, 1946 (5 to 14 years of age).	Per-centage immu-nised.	Total immunised under 15 years of age.	Total population under 15 years of age.	Percentage immunised under 15 years of age.
	Age at 31st December, 1946								Age at 31st Dec., 1946.							
	Under 1	1	2	3	4	Total under 5.			5 to 9	10 to 14	Total 5 to 14					
Ramsbottom	—	48	85	101	102	336	945	35.5	544	629	1,173	1,670	70.2	1,509	2,615	57.7
Rawtenstall (B)	11	170	311	296	183	971	1,590	61.0	1,130	1,254	2,384	2,900	82.2	3,355	4,490	74.7
Rishton	—	41	32	33	17	123	372	33.0	259	284	543	610	89.0	666	982	67.8
Royton	49	132	137	140	115	573	1,090	52.5	613	473	1,086	1,810	60.0	1,659	2,900	57.2
Skelmersdale	12	32	50	52	37	183	520	35.1	389	461	850	858	99.0	1,033	1,378	74.9
Standish-with-Langtree	1	42	76	55	57	231	583	39.6	378	325	703	1,120	62.7	934	1,703	54.8
Stretford (B)	—	611	852	625	527	2,615	4,600	56.8	2,455	1,695	4,150	7,190	57.7	6,765	11,790	57.3
Swinton & Pendlebury (B)	—	294	547	510	632	1,983	3,030	65.4	2,877	1,603	4,480	5,240	85.4	6,463	8,270	78.1
Thornton Cleveleys	—	99	114	132	101	446	898	49.6	784	789	1,573	1,700	92.5	2,019	2,598	77.7
Tottington	6	33	43	42	48	172	370	46.4	229	258	487	660	73.7	659	1,030	63.9
Trawden	1	10	4	5	11	31	140	22.1	66	102	168	230	73.0	199	370	53.7
Turton	9	48	82	124	30	293	682	42.9	417	800	1,217	1,340	90.8	1,510	2,022	74.6
Tyldesley	—	165	213	180	136	694	1,390	49.9	546	510	1,056	2,350	44.9	†1,750	3,740	60.4
Ulverston	4	59	110	68	66	307	680	45.1	441	538	979	1,240	78.9	1,286	1,920	66.9
Upholland	2	10	36	46	61	155	474	32.7	504	189	693	840	82.5	848	1,314	64.5
Urmston	12	481	477	317	329	1,616	3,080	52.4	2,038	1,833	3,871	4,750	81.4	5,487	7,830	70.0
Walton-le-Dale	—	93	167	137	158	555	1,120	49.5	823	420	1,243	1,890	65.7	1,798	3,010	59.7
Wardle	—	28	34	30	41	133	236	56.3	125	134	259	410	63.1	392	646	60.6
Westhoughton	—	122	118	131	118	489	1,120	43.6	656	688	1,344	1,880	71.4	1,833	3,000	61.1
Whitefield	18	113	135	149	175	590	1,020	57.8	841	531	1,372	1,590	86.2	1,962	2,610	75.1
Whitworth	6	64	86	102	88	346	628	55.0	497	444	941	972	96.8	1,287	1,600	80.4
Widnes (B)	1	473	845	792	757	2,868	4,280	67.0	4,284	3,766	8,050	8,200	98.1	10,918	12,480	87.4
Withnell	1	—	2	3	8	14	180	7.7	94	145	239	300	79.6	253	480	52.7
Worsley	13	201	278	208	81	781	1,940	40.2	1,135	1,010	2,145	3,050	70.3	2,926	4,990	58.6
Total—Urban Districts	683	12,541	16,301	15,424	15,098	60,047	123,366	48.6	82,589	78,131	160,720	214,027	75.1	†220,767	337,393	65.5

† Plus 510 of indefinite age.

TABLE 6—continued.

Rural districts	Total number of children immunised						Estimated mid-year population, 1946 (under 5 years of age).	Per-centage immu-nised	Total number of children immunised.			Estimated mid-year population, 1946 (5 to 14 years of age).	Per-centage immu-nised.	Total immunised under 15 years of age.	Total population under 15 years of age.	Percentage immunised 15 years of age.	
	Age at 31st December, 1946								Age at 31st Dec., 1946.	5 to 9	10 to 14						Total 5 to 14
	Under 1	1	2	3	4	Total under 5.											
Blackburn	7	48	44	34	28	161	890	18.0	306	446	752	1,460	51.5	913	2,350	38.8	
Burnley	—	107	147	132	144	530	1,000	53.0	626	667	1,293	1,890	68.4	1,823	2,890	63.0	
Chorley	—	69	153	172	162	556	2,140	25.9	1,240	1,158	2,398	3,360	71.3	2,954	5,500	53.7	
Clitheroo	9	125	82	109	89	414	596	69.4	343	318	661	940	70.3	1,075	1,536	69.9	
Fylde	16	83	119	127	102	447	860	51.9	481	450	931	1,350	68.9	1,378	2,210	62.3	
Garstang	15	137	158	127	131	568	940	60.4	828	855	1,683	1,800	93.5	2,251	2,740	82.1	
Lancaster	—	57	58	78	85	278	794	35.0	370	559	929	1,560	59.5	1,207	2,354	51.2	
Limehurst	—	34	66	59	65	224	630	35.5	238	162	400	1,000	40.0	624	1,630	38.2	
Lunodale	—	17	33	33	40	123	482	25.5	257	442	699	940	74.3	822	1,422	57.8	
Preston	138	229	252	179	315	1,113	2,580	43.1	1,587	1,546	3,133	4,450	70.4	4,246	7,030	60.3	
Ulverston	4	37	141	94	117	393	1,220	32.2	717	792	1,509	2,190	68.9	1,902	3,410	55.7	
Warrington	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
West Lancashire	25	192	263	310	330	1,120	3,150	35.5	2,155	2,139	4,294	5,590	76.8	5,414	8,740	61.9	
Whiston	135	579	1,095	438	398	2,645	3,360	78.7	2,551	2,291	4,842	5,490	88.1	7,487	8,850	84.5	
Wigan	—	33	54	41	66	194	614	31.5	387	469	856	1,060	80.7	1,050	1,674	62.7	
Total—Rural Districts	349	1,747	2,665	1,933	2,072	8,766	19,256	45.5	12,086	12,294	24,380	33,080	73.6	33,146	52,336	63.3	
Total—Urban Districts	683	12,541	16,301	15,424	15,098	60,047	123,366	48.6	82,589	78,131	160,720	214,027	75.0	†220,767	337,393	65.5	
Total—Administrative County	1,032	14,288	18,966	17,357	17,170	68,813	142,622	48.2	94,675	90,425	185,100	247,107	74.9	†253,913	389,729	65.2	

† Plus 510 of indefinite age.

TABLE 7.—VITAL STATISTICS RELATING TO MIDWIFERY AND MATERNITY AND CHILD WELFARE AREAS FOR THE YEARS
1945 AND 1946.

	1945				1946			
	Maternity and Child Welfare area.		Midwifery area.		Maternity and Child Welfare area.		Midwifery area.	
	County Council.	Autonomous	County Council.	Autonomous	County Council.	Autonomous	County Council.	Autonomous
Population (estimated)	1,832,420	893,033	1,666,560	165,860	1,924,880	939,708	1,748,810	176,070
LIVE BIRTHS—								
Legitimate	28,273	13,663	25,670	2,603	33,592	16,606	30,311	3,281
Illegitimate	2,182	1,152	1,927	255	1,872	1,008	1,648	224
Total	30,455	14,815	27,597	2,858	35,464	17,614	31,959	3,505
Rate (per 1,000 est. resident population)	16.62	16.58	16.55	17.23	18.42	18.74	18.27	19.90
STILLBIRTHS—								
No. registered	971	476	870	101	1,137	589	1,021	116
Rate (per 1,000 total births)	30	31	30	34	31	32	30	32
INFANT DEATHS—								
Legitimate	1,370	690	1,212	158	1,529	744	1,384	145
Illegitimate	155	72	141	14	135	82	116	19
Total	1,525	762	1,353	172	1,664	826	1,500	164
INFANT MORTALITY RATE—								
Legitimate	48	50	47	60	45	44	45	44
Illegitimate	71	62	73	54	72	81	70	84
Total (legitimate and illegitimate)	50	51	49	60	46	46	46	46
MATERNAL MORTALITY—								
No. of deaths from—								
Puerperal and post-abortive sepsis	14	6	12	2	13	7	12	1
Other maternal causes	59	31	52	7	39	13	38	1
Total	73	37	64	9	52	20	50	2
MATERNAL MORTALITY RATE—								
Per 1,000 live births	2.39	2.49	2.31	3.14	1.46	1.13	1.56	0.57
Per 1,000 live and stillbirths	2.32	2.41	2.24	3.04	1.42	1.09	1.51	0.55



